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ABSTRACT

This report provides a comprehensive overview of the major activities, programs, events, and developments within the United Nations Environment Programme (UNEP) in 1983. Its purpose is to provide a broad understanding of what UNEP is, how it functions, and what it does with the money it has at its disposal. Chapter I summarizes 1983 in terms of the environment. Chapter II describes legislative measures adapted by three intergovernmental bodies (UNEP Governing Council, Economic and Social Council, and General Assembly) which had a direct bearing on the work of the UNEP. Chapter III discusses the principal ways and means through which the UNEP exercised its coordinating and catalytic role during 1983. Chapter IV reviews major developments in three environmental program areas: environmental assessment (earthwatch); environmental management; and supporting measures (which include environmental education, environmental training, and information). Chapter V examines the use of resources available to the Environment Fund in 1983 and management of established trust funds. Chapter VI reviews central management of the UNEP. Supporting documentation in appendices includes statistical data related to the environment fund, list of meetings held in 1983, list of publications and papers issues in 1983, and list of member states of the Governing Council. (JN)

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ANNUAL REPORT OF THE EXECUTIVE DIRECTOR 1983

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ABBREVIATIONS

ACC	Administrative Committee on Co-ordination
AGFUND	Arab Gulf Fund for United Nations Development Organizations
ALECSO	Arab League Educational, Cultural and Scientific Organization
ASEAN	Association of South-east Asian Nations
BAPMoN	Background Air Pollution Monitoring Network, UNEP/WMO
BBC	British Broadcasting Corporation
CEFIGRE	International Training Centre for Water Resources Management
CIDIE	Committee of International Development Institutions on the Environment
CIFCA	International Centre for Training in Environmental Sciences
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLADES	Latin American Centre for Economic and Social Documentation
CMEA	Council for Mutual Economic Assistance
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLA	Economic Commission for Latin America
ECWA	Economic Commission for Western Asia
ELC	Environment Liaison Centre
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GEMS	Global Environmental Monitoring System
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
IAEA	International Atomic Energy Agency
IARC	International Agency for Research on Cancer
IBPGR	International Board for Plant Genetic Resources
ICRO	International Cell Research Organization
ICSU	International Council of Scientific Unions
IDWSSD	International Drinking Water Supply and Sanitation Decade
IFIAS	International Federation of Institutes for Advanced Study
IIASA	International Institute for Applied Systems Analysis
IIED	International Institute for Environment and Development
ILO	International Labour Organisation
IMI	International Meteorological Institute
IMO	International Maritime Organization
INFOTERRA	International Referral System for sources of environmental information
IOC	Intergovernmental Oceanographic Commission (UNESCO)
IPCS	International Programme on Chemical Safety
IRPTC	International Register of Potentially Toxic Chemicals

IUCN	International Union for Conservation of Nature and Natural Resources
MAB	Man and the Biosphere programme (UNESCO)
MARC	Monitoring and Assessment Research Centre, University of London
MIRCENs	Microbiological Resources Centres
NASA	National Aeronautics and Space Administration, United States
NGOs	Non-governmental organizations
NOAA	National Oceanic and Atmospheric Administration, United States
OAS	Organization of American States
OAU	Organization of African Unity
OECD	Organisation for Economic Co-operation and Development
SACEP	South Asia Co-operative Environment Programme
SCOPE	Scientific Committee on Problems of the Environment
SPC	South Pacific Commission
SPEC	South Pacific Bureau for Economic Co-operation
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNEPCOM	USSR Commission for UNEP
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNSO	United Nations Sudano-Sahelian Office
UNU	United Nations University
USAID	United States Agency for International Development
WCIP	World Climate Impact Studies Programme
WHO	World Health Organization
WTO	World Tourism Organization
WMO	World Meteorological Organization
WWF	World Wildlife Fund

PREFACE

The present report, which follows the general format of the 1982 Annual Report, is being submitted to the Governing Council of UNEP in compliance with Council decision 11/1, section I, paragraph 7. The 1982 Annual Report, being the first such report submitted to the Council, necessarily contained a number of facts and details which furnished a background to the subjects discussed. In the interest of brevity, the present report is confined to the year 1983, with cross-references to the historical detail provided in the 1982 Annual Report.

The object of the report remains the same: to provide readers, whether or not they are members of government delegations to the Council, with a comprehensive overview of the major activities, programmes, events and developments within the United Nations Environment Programme in 1983. It is hoped that this overview will provide the reader with a broad understanding of what UNEP is, how it functions, and what it does with the money it has at its disposal. Thus, the Annual Report may be viewed as a record of the stewardship exercised by UNEP in its role of co-ordinator, catalyser and stimulator of activities, projects and programmes related to the human environment.

Chapter I

THE YEAR IN RETROSPECT

1. Glancing back across the pages of the 1983 calendar, how would one summarize the year as far as the environment was concerned? Unlike 1982, in which Governments and environmentalists met in Nairobi at a Governing Council session of a special character to commemorate the tenth anniversary of the Stockholm Conference on the Human Environment, and to renew their dedication and commitment to the cause of the environment, 1983 could perhaps be characterized as "the year of a fresh look at the environment".

2. There were, thankfully, no environmental catastrophes of global significance during 1983. Unfortunately, neither were there any major breakthroughs in the environment on the international stage. There were the usual reports of environmental tragedies and a significant number of environmental improvements; the end result was a sort of balance between set-backs and gains. One could, perhaps, describe the year—as far as environmentalists were concerned—as a steady forward grind against indifference, ignorance and miserliness.

3. The year under review certainly provided cause for alarm. The economic crisis continued and, although some thought they saw dim flickerings of hope on the horizon in a few developed countries, the crushing burden of debt on many of the developing countries threatened to rob them of their last resource—hope. Poverty—the arch-foe of sustainable, environmentally sound development—was rapidly increasing. The twin spectres of drought and starvation reappeared with a vengeance, particularly in the Sudano-Sahelian region, threatening a destruction as devastating as that of the 1970s and demonstrating very clearly that the decade-long efforts of the international community to ameliorate those scourges had been too few and too feeble.

4. And the year 1983 witnessed the continuation and intensification of the ultimate debasement of the environment—man pitted against man, nation against nation. Governments that sit together, counselling on how best to protect and improve the human environment, continued to use their funds, their technologies and their political will to send their young men into battle to destroy and annihilate the most precious gift of our environment—life itself.

5. And yet ... such a picture, gloomy and true as it may be, would not be a fair or balanced appraisal of the human environment in 1983. At the very time that international tensions reached new heights, during this period of severe economic recession, the international community showed more clearly than ever its awareness of mutual interdependence and the need—as well as the political will—for international co-operation to pro-

tect and enhance the human environment in the only earth we have.

6. This spirit of co-operation and compromise was seen and commented upon by many of the delegations to the eleventh session of the Governing Council. Issues were resolved and decisions taken by consensus, rather than by vote, which achieves little else but to document lack of agreement.

7. The Secretary-General of the United Nations, in his report to the thirty-eighth session of the General Assembly on the work of the organization, underlined that "we are more than ever in need of a fresh collective look at some of the major problems of the world". But even before the Secretary-General's report, the representatives of 85 Governments, attending the eleventh session of the UNEP Governing Council in May 1983, had already agreed to take a "fresh collective look" at one of the major problems of the world, our human environment. In decision 11/3 the Council sketched out the process by which a global environmental perspective to the year 2000 and beyond is to be prepared. In this environmental perspective, globally shared perceptions are to be identified, a long-term agenda for international action articulated, and an agreed set of aspirational goals for the world community formulated. This decision of the Governing Council was well received by the General Assembly, which on 19 December 1983 adopted its own resolution on this subject.[1]

8. At the same session the members of the Governing Council decided to make a contribution to the North-South dialogue by requesting the Executive Director to focus his 1984 report on the state of the environment on the subject of the environment in the dialogue.[2] So far the various dialogues between developed and developing countries taking place in a multiplicity of forums have tended to take the form of monologues, each side presenting set statements, with no evidence that the other side was listening. The Council's request was based on the concrete and very real hope that the spirit of co-operation prevailing in international efforts to protect the environment might prove infectious and spread to encompass the other, more contentious elements of the dialogue. This hope, endorsed by all members of the Governing Council, is hard evidence of the universally felt need of the international community for increased and committed international co-operation, not despite, but because of, increased international tension.

9. Another example of co-operation rather than confrontation was the fact that the Governing Council unanimously welcomed the Executive Director's call to industry to convene, in co-operation with UNEP, an international conference to consider ways in which industry might contribute more fully and effectively to environmentally sound development.[3] The response and support have been most encouraging, and the conference is scheduled to be held in late 1984.[4]

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1 The Executive Director is reporting to the Council on this subject in his introductory report (UNEP/GC.12/3).

2 Decision 11/1, sect. II, para. 3. The report will appear as document UNEP/GC.12/11.

3 Decision 11/1, sect. V, para. 1.

4 A more detailed account of the plans for this conference is contained in the Executive Director's introductory report (UNEP/GC.12/3).

10. In the early days of the environmental movement, industry was often cast in the role of the nemesis of environment. But this is not the true state of affairs. Admittedly, mistakes were made in the name of development, serious mistakes, but now industrialists and environmentalists alike realize that there is no real development or advance when the environment is ravaged. Real development is sustainable development, and this can only be achieved by taking environmental considerations fully into account at all stages—from conception to implementation—in development planning. We have come a long way when environmentalists and industrialists sit down together, as partners rather than opponents, to plan further development for the benefit of mankind.

11. Admittedly, large conferences will never by themselves solve the problems of the environment. But world-wide gatherings of people with similar responsibilities reinforce the sense of international partnership in a common effort. For this reason, the Governing Council welcomed the Executive Director's plan to convene a parliamentary conference on the environment, jointly with the Inter-Parliamentary Union. Parliamentarians and parliaments have manifested considerable enthusiasm and imagination when faced with the challenges of environmental degradation and public calls for corrective measures. The conference will help parliamentarians, who understandably give priority to local and national environmental issues, to focus also on the broader international environmental problems that can only be solved by political co-operation among States. The conference is scheduled to be held in November 1984 at the invitation of the Kenyan Parliament, at the new United Nations complex in Nairobi.

12. The scourges of desertification, drought and famine, particularly in many parts of Africa, have been mentioned earlier. Yet here, too, there are encouraging signs of the international community pulling together for a common cause. The Administrative Committee on Co-ordination, which is chaired by the United Nations Secretary-General and includes the executive heads of the specialized agencies as well as a number of senior officials of the United Nations Secretariat, draws attention in its report to the twelfth session of the Governing Council[5] to the "active participation of many United Nations agencies" in desertification control activities, and notes the "increasing attention being given by appropriate United Nations agencies to activities to combat desertification in the Sudano-Sahelian region." The United Nations Sudano-Sahelian Office (UNSO), a joint UNEP/UNDP venture, is mobilizing resources for anti-desertification projects. There are close and productive relationships between many United Nations agencies and institutions, and between UNSO and the Permanent Inter-State Committee on Drought Control in the Sahel, the Club du Sahel, the Sahelian Institute and others. And the efforts of all these agencies and institutions enjoy the support of the international community. Governments and groups of Governments have contributed funds and expertise both bilaterally and multilaterally. The Governing Council's decision to conduct a detailed assessment of the progress in the implementation of the Plan of Action to Combat Desertification at its forthcoming twelfth session[6] is another sign of international interest in, and concern for, this major environmental problem.

13. We should not delude ourselves, however. What we have done about the problem

5 UNEP/GC.12/8.

6 Decision 11/1, sect. VIII.

of desertification and drought in the past decade amounts to very little when compared to the magnitude and seriousness of the problem. We have merely planted the seeds for the solution. We now need the fertile soil of political will and determination, the fertilization of modern technologies and skills, and abundant showers of funding if the seeds that have been sown are to grow and mature.

14. The year 1983 also saw the development within UNEP of a clearing-house mechanism, the concept of which had formally emerged at the tenth session of the Governing Council in May 1982.[7] With resources generously made available to UNEP by the Governments of the Federal Republic of Germany, the Netherlands and Sweden, over and above their regular contributions to the Environment Fund, UNEP has begun establishing a system by which it could enhance its catalytic role to the direct benefit of developing countries. The basic concept is that UNEP should provide assistance to developing countries in the formulation of projects designed to meet their most serious and pressing environmental problems. With the help and good offices of UNEP, it is hoped that projects can be designed in such a way as to attract bilateral and multilateral financing.

15. Another important aspect of the clearing-house is technical co-operation between developing countries themselves in the field of the environment. At the eleventh session of the Governing Council, the representative of one developing country—Argentina -, announced that his Government was donating $1 million over a five-year period to support environmental technical co-operation between developing countries. It is to be hoped that other developing countries will soon follow this generous example with offers of financial and/or technical support.

16. Thus, the year 1983 showed a good deal of promise for the environment. The required spirit and good will were much in evidence. The challenge of the present is to transform that spirit and good will into concrete programmes and activities so that our children and our children's children will be able to look forward to a future in a better, cleaner and healthier environment.

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7 See decisions 10/4, 10/6 and 10/26. The Executive Director will be submitting a separate progress report on this subject to the Council in document UNEP/GC.12/4.

Chapter II

INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP

1. As explained in the Executive Director's Annual Report for 1982,[1] the General Assembly, created the Governing Council of UNEP, composed of 58 member States elected by the General Assembly,[2] by resolution 2997 (XXXVII) of 15 December 1972. The Assembly also decided that the Governing Council should report to it annually through the Economic and Social Council. The work of the UNEP secretariat is therefore monitored and guided by three intergovernmental bodies—the UNEP Governing Council, the Economic and Social Council and the General Assembly. In the following paragraphs, a brief description is given of the legislative measures adopted by those bodies in 1983 which had a direct bearing on the work of UNEP.

A. UNEP GOVERNING COUNCIL

2. The eleventh session of the Governing Council was held in Nairobi from 11 to 24 May 1983. At that session, the Council adopted a total of 12 decisions, 6 of which dealt with policy issues, 3 with programme questions and 3 with the Environment Fund.

3. The first of the policy decisions (11/1) was entitled "Programme policy and implementation" and in addition to providing general policy guidance, it dealt with the following subjects: state-of-the environment and environmental data reports; co-ordination; co-operation between UNEP and UNCHS (Habitat); the proposed industry and environment conference; the proposed parliamentary conference on the environment; relationship between UNEP and non-governmental organizations; and the assessment of progress in the implementation of the Plan of Action to Combat Desertification. Decision 11/2 related to the periodicity and duration of Governing Council sessions, while 11/3 recommended to the General Assembly arrangements for the preparation of an environmental perspective. In decision 11/4, the Council stated its views on Israel's decision to build a canal linking the Mediterranean Sea to the Dead Sea. The impacts of *apartheid* on the environment were the subject of decision 11/5, and the last of the policy decisions (11/6) was entitled "Arms and the environment".

4. Decision 11/7 was an omnibus decision dealing with various aspects of the programme. The decision was divided into nine parts: Part one—Programme budget and general matters; Part Two—Environment and development; Part Three—Environmen-

1 UNEP/GC.11/2, chap. II, para. 1.

2 Lists of the member States of the Governing Council in 1983 and 1984 appear in annex I.

tal awareness; Part Four—oceans; Part Five—water; Part six—Terrestrial ecosystems: Genetic resources; Part seven—Arid and semi-arid land ecosystems and desertification control: desertification in Africa; Part eight—Regional activities; and Part nine—Implementation.

The subject of decision 11/8 was assistance to the South Asia Co-operative Environment Programme, while the last of the programme decisions (11/9) dealt with regional programmes in Latin America and the Caribbean.

5. The three decisions related to the Environment Fund were 11/10—the Environment Fund; 11/11—additional resources for dealing with serious environmental problems in developing countries; and 11/12—programme and programme support costs.

6. Several of the principal actions of the Council at its eleventh session have already been touched upon in Chapter 1 above. In addition, the introductory report of the Executive Director[3] includes a section dealing with the implementation of Governing Council decisions, focusing primarily on the six policy decisions. Moreover, in the documents being submitted to the twelfth session under items 7 (a) and (b) of the provisional agenda, the Council will have before it reports on the implementation of the programme decisions. The implementation of the three decisions relating to the Environment Fund are to be found in the documents being submitted to the Council under item 8 of the provisional agenda.

B. ECONOMIC AND SOCIAL COUNCIL

7. By its decision 1983/101 of 4 February 1983, the Economic and Social Council decided not to consider draft proposals under the environment item, except for specific proposals in the report of the UNEP Governing Council requiring action by the Economic and Social Council. Consequently, the report of the Governing Council on the work of its eleventh session was simply to be transmitted to the General Assembly by the Economic and Social Council.

8. However, in its decision 1983/168, adopted on 25 July 1983, the Economic and Social Council:

(a) Took note of and transmitted to the General Assembly the reports of the Governing Council of UNEP on its eleventh session[4] and on the implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification,[5] together with the recommendations of the Governing Council for consideration and action by the Assembly;

(b) Noted with appreciation Governing Council decision 11/2 of 23 May 1983 concerning the periodicity and duration of Governing Council sessions;

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3 UNEP/GC.12/3.

4 *Official Records of the General Assembly, Thirty-eighth Session, Supplement No. 25* (A/38/25).

5 UNEP/GC.11/10/Add.1.

(c) Took note of Governing Council decision 11/3 of 23 May 1983 on the process of preparation of the environmental perspective, and recommended to the General Assembly the adoption of the draft resolution annexed to that decision.

C. GENERAL ASSEMBLY

9. At its thirty-eighth session, the General Assembly, in addition to electing 19 States as members of the UNEP Governing Council for three-year terms,[6] adopted six resolutions that had a direct bearing on the work of UNEP.

Resolution 38/149— Protection against products harmful to health and the environment

10. Recalling its earlier resolutions 36/166 of 16 December 1981 and 37/137 of 17 December 1982, and bearing in mind the oral report presented by the Secretariat on progress achieved in the implementation of resolution 37/137[7], the General Assembly took note of the report of the Secretary-General on the exchange of information on banned hazardous chemicals and unsafe pharmaceutical products,[8] and of the work being carried out by the UN system of organizations. It noted with satisfaction that the work on the consolidated list of products whose consumption and/or sale had been banned, withdrawn, severely restricted or, in the case of pharmaceuticals, not approved by Governments, was in the process of being completed and requested the Secretary-General to make the consolidated list available and to update it regularly.

11. The Assembly urged the relevant organs, organizations and bodies of the United Nations system, particularly FAO, WHO, ILO, UNEP, GATT and the UN Centre on Transnational Corporations, to continue to co-operate fully in providing information for the list. It expressed its appreciation for the co-operation extended by Governments, and urged all Governments to provide the necessary information for inclusion in the list. It urged non-governmental organizations to co-operate with the Secretary-General in the preparation of the consolidated list and requested the Secretary-General to submit a report on the implementation of resolution 37/137, including the consolidated list, to the Assembly at its thirty-ninth session.

12. The Assembly further requested the Secretary-General to submit to it at its thirty-ninth session, through the Economic and Social Council, a report on the exchange of information on banned hazardous chemicals and unsafe pharmaceutical products, identifying elements for possible further work in this area with regard to the needs and capabilities of developing countries to monitor and control those substances. The Assembly requested the Secretary-General and the organs, organizations and other competent bodies of the UN system to continue to provide, within available resources, the necessary technical assistance to the developing countries, at their request, for the establish-

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6 Lists of member States of the Council in 1983 and 1984 appear in annex I.

7 This resolution, also on protection against products harmful to health and the environment, was described at some length in the 1982 Annual Report (UNEP/GC.11/2, chap. II, paras. 33-35).

8 A/38/190—E/1983/67.

ment or strengthening of national systems for better use by those countries of the information provided with regard to banned hazardous chemicals and unsafe products as well as for adequate monitoring of the import of those products.

Resolution 38/161— Process of preparation of the environmental perspective to the year 2000 and beyond

13. Recalling the importance it had attached at previous sessions to the development of an environmental perspective, and recalling also its request to the UNEP Governing Council to make concrete recommendations to it at its thirty-eighth session on the modalities for preparing the environmental perspective, the Assembly noted with satisfaction Governing Council decision 11/3 on the process of preparation of the perspective. It welcomed the desire of the Council to develop the perspective and transmit it to the General Assembly for adoption, benefiting in carrying out that function from its consideration of the relevant proposals made by a special commission and approved the decision of the Council to establish an intergovernmental inter-sessional preparatory committee to articulate to the special commission, at an early stage the Governing Council's expectations regarding the matters which it hoped would, *inter alia*, receive consideration by the commission. The Assembly noted that the special commission should make known to the committee the preliminary formulation of its conclusions on matters within the mandate and purview of UNEP, with a view to giving consideration to any views of the committee thereon. The Assembly also noted that the cost of the intergovernmental inter-sessional preparatory committee would not result in any net increase in the regular budget of the United Nations.

14. The Assembly welcomed the intention of a number of Governments to support the preparation of the environmental perspective by facilitating the establishment of the special commission, through the provision of voluntary contributions, and requested the Secretary-General, in consultation with the Executive Director of UNEP and with Governments, and after such other appropriate consultations as they deemed necessary, to name the chairman and vice-chairman of the special commission. The chairman and vice-chairman should have experience of policy-making at the highest level, demonstrated interest in environmental and developmental issues, and the capacity to attract attention to the work of the commission; they should also represent both developed and developing countries.

15. The Assembly expressed the view that the chairman and vice-chairman, in selecting the members of the special commission, which should co-operate closely with the intergovernmental inter-sessional preparatory committee, should take fully into account the need for appropriate geographical distribution and regional balance and the importance of ensuring that at least half of the members of the commission were from developing countries, as well as the need to consult with representatives of Governments, intergovernmental and non-governmental organizations, industry, the scientific community and others concerned with the environment. The Assembly requested the Executive Director to establish an interim special account to which voluntary contributions would be credited, and from which disbursements would be made for the purposes of the establishment of the special commission. Custody over and responsibility for that account would be transferred to the commission, in accordance with its procedures, upon its establishment.

16. The Assembly proposed several areas of focus for the work of the special commission and suggested that in fulfilling its terms of reference, the special commission should:

"*(a)* Maintain an exchange of views with the scientific community, environmentalists and all other sections of public opinion, particularly youth, concerned with the environment, and those concerned with the relationship between development and environment;

"*(b)* Receive the views of Governments, principally through the Governing Council and its intergovernmental inter-sessional preparatory committee, and through contacts with national leaders, opinion makers and concerned international figures;

"*(c)* Maintain links with other intergovernmental bodies within and outside the United Nations system, while however using the Administrative Committee on Co-ordination and the designated officials for environmental matters as the channels of communication with the United Nations system; the willingness of the Administrative Committee on Co-ordination to assist should be communicated to the commission;

"*(d)* Take account of the scope of environmental issues as defined by the United Nations system-wide medium-term environment programme and as reflected in the efforts of the United Nations system, including the United Nations Environment Programme, in the field of the environment;

"*(e)* Make full use of relevant existing reports and material".[9]

17. The Assembly considered that the special commission should make available a report on environment and the global *problématique* to the year 2000 and beyond, including proposed strategies for sustainable development, within two years of its establishment, and decided that, on matters within the mandate and purview of UNEP, the report of the special commission should, in the first instance, be considered by the Governing Council, for transmission to the General Assembly together with its comments and for use as basic material in the preparation of the environmental perspective for adoption by the Assembly. The Assembly further decided that on matters which were under consideration and/or review by the General Assembly itself, the Assembly would consider the relevant aspects of the report of the special commission.

18. Finally, the General Assembly recognized that the special commission might, in addition, address its report, after consideration by the Governing Council or the intergovernmental inter-sessional preparatory committee, also to other forums, intergovernmental and non-governmental, or to Governments, individuals and the general public, as it saw fit, it being understood that the report of the commission would not be binding on Governments.

Resolution 38/162— Remnants of war

9 General Assembly resolution 38/161, para. 9.

19. Recalling its various resolutions on this subject as well as the decisions of the Governing Council of UNEP and the resolution adopted at the Fifth Conference of Heads of State or Government of Non-Aligned Countries, the General Assembly expressed its conviction that the responsibility for the removal of the remnants of war should be borne by the countries that planted them. Recognizing that the presence of material remnants of war, particularly mines, in the territories of developing countries, seriously impeded the development efforts of those countries and caused loss of life and property, the Assembly took note of the report of the Secretary-General[10] on the remnants of war and the study annexed thereto, and expressed its regret that no concrete measures had been taken to solve the problem of remnants of war despite the resolutions and decisions adopted by the Assembly and the Governing Council.

20. The Assembly reiterated its support of the just demands of the developing countries affected by the presence of remnants of war in their territories for full compensation from the States responsible for those remnants. Consequently, the Assembly requested the Secretary-General, in co-operation with the Executive Director of UNEP, to continue to seek the views of States on the recommendations contained in the study annexed to the Secretary-General's report and requested the Secretary-General to intensify his efforts to urge the States concerned immediately to conduct bilateral consultations with the aim of concluding, as soon as possible, agreements for the solution of the problem. The General Assembly called upon all States to co-operate with the Secretary-General in carrying out the tasks requested of him so as to enable him, in co-operation with the Executive Director of UNEP, to submit to the Assembly at its thirty-ninth session a report on the results of his consultations and endeavours with the States concerned.

Resolution 38/163— Study on financing the Plan of Action to Combat Desertification

21. Recalling its previous resolutions on the subject, the General Assembly took note of the report of the Secretary-General on financing the Plan of Action to Combat Desertification,[11] and noted once again that very few replies had been received from Governments in response to the Assembly's request in its resolution 37/220. Because of the paucity of replies the Secretary-General had been unable to prepare, in co-operation with the Executive Director of UNEP, the report that had been requested by the General Assembly. Consequently the Assembly again requested all Member States that had not yet provided their comments to the Secretary-General on the studies, recommendations and modalities for obtaining financial resources, to do so as soon as possible. The Assembly also requested all Member States that had not yet provided comments to the Secretary-General on the expert feasibility study and working plan for the establishment of an international financial corporation to do so as soon as possible, particularly with respect to the establishment of the corporation and their interest in participating financially therein.

22. The Assembly requested the Secretary-General, in co-operation with the Executive Director of UNEP, to report to the Assembly at its fortieth session on the implemen-

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10 A/38/383.

11 A/38/403.

tation of the resolution.

Resolution 38/164— Implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification

23. Recalling its own resolutions on the subject and noting Governing Council decision 11/7, part seven, section B on the implementation of the Plan of Action in the Sudano-Sahelian region, as well as Economic and Social Council resolution 1983/68 on the climatic situation and drought in Africa, the General Assembly, after considering the report of the UNEP Governing Council on the implementation of the Plan of Action in the Sudano-Sahelian region,[12] took note of the Council's report and expressed its satisfaction with the progress made by UNSO on behalf of UNEP, under a joint venture between UNEP and UNDP, to assist the Governments of the region in implementing the Plan of Action.

24. The Assembly requested the Governing Council of UNEP and the Governing Council of UNDP to continue to provide adequate support for UNSO in order to enable it to respond more adequately to the pressing needs of the countries of the Sudano-Sahelian region. It also invited the Governing Council of UNEP to examine, at its twelfth session, the possibility of including Ghana and Togo in the list of countries which receive assistance through UNSO, and to report on the matter to the Assembly at its thirty-ninth session.[13]

25. The Assembly expressed its gratitude to the Governments, UN agencies, intergovernmental organizations and other organizations that had contributed to the implementation of the Plan of Action in the Sudano-Sahelian region, and urged all Governments to respond favourably to requests for assistance from the Governments of that region in combating desertification.

26. Finally, the Assembly requested the Governing Council of UNEP to continue to report annually to it, through the Economic and Social Council, on the implementation of the Plan of Action in the Sudano-Sahelian region.

Resolution 38/165— International co-operation in the field of the environment

27. The sixth resolution adopted by the Assembly was an omnibus resolution based on its consideration of the report of the Governing Council on its eleventh session.

28. The Assembly first took note of the Governing Council's report on its eleventh session and the decisions contained therein, and welcomed Council decision 11/1, by which it had decided, *inter alia*, that the topic to be considered in the 1984 report on the state of the environment would be "The environment in the dialogue between and among developed and developing countries". The Assembly also took note of sections V and VI of decision 11/1 relating to the convening of an international conference on world industry

12 A/38/304, annex. This report was originally submitted to the Council at its eleventh session as document UNEP/GC.11/10/Add.1.

13 More detailed information on this subject is provided in chapter IV below, paragraphs 121-123.

and environmental management and a parliamentary conference.

29. The Assembly took note with appreciation of Governing Council decision 11/2 on the periodicity and duration of Governing Council sessions, and endorsed the decision that there should be no session of the Governing Council in 1986, on an experimental basis. It also took note of decision 11/5 on the impacts of *apartheid* on the environment, directed at promoting public awareness of the plight of the victims of *apartheid*.

30. The Assembly welcomed decision 11/7, part one, by which the Council, while setting priorities for its implementation, approved the programme budget for the first biennium (1984-1985) of the system-wide medium-term environment programme as an overall framework for UNEP activities during that period. It invited Governments participating in relevant governing bodies of specialized agencies and other UN organizations to endeavour to take the provisions of the system-wide medium-term environment programme fully into account in their consideration of related issues. The Assembly also welcomed the importance the Governing Council attached to regional approaches and programmes in the field of international environmental co-operation, as reflected in decisions 11/7, 11/8 and 11/9.

31. The General Assembly welcomed the Council's decision to devote two days during its twelfth session to a detailed assessment of the implementation of the Plan of Action to Combat Desertification, and decided to expand the mandate of the Consultative Group for Desertification Control to include information exchange on anti-desertification policies and programmes of its participants.

32. The Assembly welcomed the progress made in the implementation of the Montevideo Programme for the Development and Periodic Review of Environmental Law,[14] and appealed to Governments to participate actively in the programme and provide adequate financial resources and/or facilities in order to achieve its full and timely implementation.

33. The assembly reaffirmed the need for strengthening the co-ordinating role of UNEP, as well as the need for additional resources to assist developing countries in dealing with serious environmental problems. It urged the Executive Director, in consultation with Governments and international organizations, to accelerate and intensify his efforts in that field, and also urged him to facilitate the provision of expert assistance to and among developing countries, at their request, in the preparation, monitoring and evaluation of priority environmental programmes and projects, and in promoting the exchange of information and experience with respect to the integration of environmental considerations into development activities.

34. The General Assembly expressed its appreciation to Governments that had contributed to the Environment Fund, particularly to those that had done so for the first time in 1982 and 1983 and those that had increased their contributions for those years. It noted with deep concern the very meagre pledges to the Environment Fund so far received from Governments and strongly appealed to all Governments to pledge their contributions as soon as possible for 1984 and, where possible, for 1985.

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14 UNEP/GC.10/5/Add.2, annex, chap. II.

Chapter III

THE CO-ORDINATING AND CATALYTIC ROLE OF UNEP

1. INTRODUCTION

1. The catalytic, co-ordinating and stimulating role of UNEP finds expression, in one form or another, in almost all of its activities. For this reason, it would be impossible to give a comprehensive description of all the co-ordinating and catalytic activities undertaken by the organization during 1983 without extensive repetition. Numerous examples are furnished in chapter IV below ("The Environment Programme") of activities undertaken by other agencies and organizations at the behest of, or in co-operation with, UNEP. The present chapter is therefore confined to a brief general description of the principal ways and means through which UNEP exercised its co-ordinating and catalytic role during the year under review.

2. CO-ORDINATION WITHIN THE UNITED NATIONS SYSTEM

(a) The Administrative Committee on Co-ordination (ACC)

2. The historical development of the Committee's involvement in the co-ordination of United Nations environmental programmes was explained at length in the 1982 Annual Report,[1] and thus no recapitulation is called for here.

3. In 1983, ACC met on 25 and 26 October to discuss and adopt its report to the Governing Council at its twelfth session.[2] ACC noted that at its twelfth session the Council was to review and appraise the implementation of the International Development Strategy for the Third United Nations Development Decade as far as the environment was concerned, and agreed to assist the Council in that task, given the multisectoral nature of the activities of the UN system with regard to the environment. ACC subsequently requested the Designated Officials on Environmental Matters [3] to prepare a report on the subject, through a process of inter-agency consultations.[4]

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1 UNEP/GC.11/2, chap. III, paras. 3-5.

2 The report is being submitted to the Council in document UNEP/GC.12/8.

3 The functions of the Designated Officials on Environmental Matters were described in the 1982 Annual Report (UNEP/GC.11/2, paras. 16-18).

4 The report is being submitted to the Council in document UNEP/GC.12/8/Add.1.

(b) Co-operation with agencies and organizations

4. There are several mechanisms at various levels which facilitate co-operation and co-ordination between UNEP and other United Nations agencies and organizations. While ACC considers such matters at the highest policy-making level, opportunities arise for discussion of the more specific aspects of co-operation at the meetings of the Designated Officials on Environmental Matters. During 1983 this group held two meetings. The first, held at the time of the eleventh session of the Governing Council in Nairobi in May, was an informal meeting at which the Designated Officials exchanged views on the implications for each organization of the decisions adopted by the Council at that session, and especially the Council's approval of the first biennial programme budget (1984-1985) under the system-wide medium-term environment programme.

5. The second meeting of the Designated Officials took place at ILO headquarters in Geneva from 21 to 23 September, for the purpose of preparing the draft of the ACC report to the Governing Council at its twelfth session. The officials were also engaged in intensive inter-agency consultations to assist them in preparing their report on the implementation of the environmental provisions of the International Development Strategy for the Third United Nations Development Decade. A draft was prepared by UNEP and circulated to the officials for their comments. A meeting was then scheduled for January 1984, at which they were expected to review and approve the draft.

6. Another important instrument in ensuring co-ordination and co-operation among the bodies of the UN system in the field of the environment is that of joint programming. As noted in the 1982 Annual Report,[5] a comprehensive round of thematic joint programming exercises was held in 1982 with a view to the submission of the 1984-1985 programme budget to the Council at its eleventh session. Following its adoption by the Council, it was felt that no further thematic joint programming meetings were necessary, apart from a meeting on the working environment held in Geneva in January 1983. However, it is expected that in early 1984, consultations will begin on activities to be undertaken during the second biennium (1986-1987) of the medium-term programme.

7. During the year under review, UNEP had some 175 projects under implementation with the various agencies and organizations of the UN system. The major partners in this exercise were, as in the past, FAO, ILO, IMO, UNCHS (Habitat), UNESCO, WHO and WMO. Additionally, UNEP had one or more ongoing projects with each of the United Nations regional commissions. Other partners were IAEA, UNCTAD, UNICEF, UNDRO, the UN Centre for Regional Development, the UN Centre on Transnational Corporations, the UN Department of International Economic and Social Affairs, the UN Department of Technical Co-operation for Development, the UN International School and the UN Research Institute for Social Development. Four projects with the UNESCO Intergovernmental Oceanographic Commission were operational during the year under review, as well as two with the FAO International Board for Plant Genetic Resources. Although these mere listings of agencies do little to convey the depth of the co-operation and co-ordination involved, they do indicate the breadth of en-

5 UNEP/GC.11/2, chap. III, paras. 6-15.

vironmental co-operation in the UN system. Further information on these activities may be found in the bimonthly *Report to Governments*, where the objectives, progress and results of UNEP projects are continuously reported.

3. CO-ORDINATION WITH INTERGOVERNMENTAL ORGANIZATIONS

8. An increasing number of intergovernmental organizations are actively participating in environmental fields, whether through programmes of their own or through activities related to a specific area of environmental concern such as pollution control, rational management of natural resources, desertification containment and control, etc. In 1983, 40 international intergovernmental organizations other than those within the UN system enjoyed official observer status with the Governing Council.

9. As was made clear in the 1982 Annual Report,[6] UNEP maintains close links with the Organisation for Economic Co-operation and Development (OECD), and particularly with its Environment Committee and Development Assistance Committee, whose meetings are regularly attended by observers from UNEP. Co-operation between the two organizations was especially close in 1983 in the areas of chemicals and transport, for work in OECD on the export of banned and severely restricted chemicals and the transfrontier movement of hazardous wastes is of great relevance to the Programme's global efforts in the same field. During 1983, a formal agreement was concluded between the International Programme on Chemical Safety (IPCS) and OECD, aimed at increasing co-operation between OECD and ILO, UNEP and WHO (the organizations participating in IPCS) with regard to chemical products. UNEP and OECD also co-operate closely on work relating to environmental impact assessment, and UNEP participated in the work of the OECD *Ad hoc* Group on Environmental Assessment and Development Assistance, which held its first meeting in October 1983.

10. The Commission of the European Communities has for some time been carrying out a large-scale environmental programme on behalf of its 10 member States. The third Environmental Action Programme, adopted in February 1983, commits the European Economic Community to the progressive integration of environmental requirements into the planning and execution, within all economic sectors (including the Community's aid programme) of actions that can significantly affect the environment. A formal exchange of letters between the Executive Director of UNEP and the President of the Commission in June 1983 was intended to reinforce and extend the co-operation between the two organizations.

11. In 1983, the European Investment Bank, with a substantial loan programme of about $US 4 billion a year (a significant proportion of which goes to finance Development in 14 Mediterranean and 61 African, Caribbean and Pacific countries), became a signatory of the Declaration of Environmental Policies and Procedures Relating to Economic Development, adopted in New York in 1980. At the signing ceremony, held in Luxembourg on 26 April 1983, the Executive Director addressed the Board of the Bank and welcomed the Bank's willingness to extend financing for such measures as pollution control and environmental protection in developing countries.

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6 *Ibid.*, para. 23.

12. Throughout the year under review, UNEP maintained regular contacts with the Council of Europe, and particularly with the Council's Committee for the Conservation of Nature and Natural Resources, which is active in a wide range of environmental issues of relevance to the UNEP programme. UNEP has followed with special interest the progress of work in the areas of environmental education and training and the conservation of wildlife and natural habitats, as well as the entry into force of the Berne Convention on the Conservation of European Wildlife and Natural Habitats, which is of potential interest to other regions, especially Africa, as the Convention deals with several species which migrate between Europe and Africa.

13. As previously explained, relations between UNEP and the Council for Mutual Economic Assistance (CMEA) are covered by a memorandum of understanding, signed in 1981, in which the areas of co-operation are delineated and the administrative measures to foster such co-operation described.[7] In March 1983, on the occasion of a visit to the CMEA secretariat by the Executive Director, the two sides assessed achievements to date. Subsequently, at the suggestion of the Executive Director, a group of CMEA experts held the fourth in a series of meetings on the Global Environmental Monitoring System (GEMS) at which they discussed and approved a plan of action with a view to extending UNEP/CMEA co-operation in this field. The experts agreed that the network of monitoring stations in the CMEA member countries functioning as an eastern European subsystem of GEMS should be strengthened to deal with integrated background monitoring. They also adopted a draft project proposal for the training of personnel from developing countries in the organization and management of a system of protected areas and national parks.

14. In October 1983, consultations were held in Moscow between CMEA, the International Register of Potentially Toxic Chemicals (IRPTC) and IPCS on arrangements for intensified co-operation, and an aide-mémoire was signed concerning questions of common interest and possibilities of future co-operation. Under the joint USSR-IRPTC project on "Control of hazards posed by chemicals to human health and the environment", a second meeting of experts on toxicological and safety data on chemical substances in international trade was held in Moscow in December 1983. The participants discussed and approved a basic set of data for use in assessing the hazards posed by such chemicals to man and the environment, and the conditions for their safe use.

15. In the Africa region, UNEP has continued to participate in joint meetings of the UN and OAU secretariats. UNEP representatives attended the OAU Assembly of Heads of State and Government in Addis Ababa in 1983. UNEP has also been in close consultation with OAU, as requested by the Governing Council in decision 11/7, part eight, with regard to the possible convening of an African conference on the environment. The close co-operation of UNEP, through UNSO, with the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS) is described in detail below (see chapter IV, paragraph 112).

16. As far as the Arab region is concerned, UNEP was engaged in three projects in co-

7 *Ibid.*, para. 26.

operation with the Arab League Economic, Cultural and Scientific Organization in 1983: in activities under the regional seas programme in the Red Sea and the Gulf of Aden;[8] in the transnational green belt project in north Africa; and in a project dealing with the Mediterranean Sea. Co-operation also continued with the Regional Organization for the Protection of the Marine Environment, which has assumed responsibility for the implementation of regional seas activities in the Kuwait Action Plan region.[9]

17. UNEP worked in close co-operation with the League of Arab States in preparing for a joint symposium, scheduled to be held in 1984, on the incorporation of environmental considerations into development projects in Arab States, at the planning stage. The League has agreed to inform all Arab States of the importance of studying and reviewing the environmental implications of development projects prior to implementation.

18. In October 1983, in discussions with officials from the Arab Bank for Economic Development in Africa, it was proposed that the Bank and UNEP should co-operate in studying the environmental aspects of projects financed by the Bank. It was also suggested that UNEP should provide technical assistance for the introduction of the environmental dimension into projects prepared and financed by the Bank.

19. During the year under review, UNEP also initiated discussions with a number of other leading Arab intergovernmental organizations, including the the Arab Fund for Economic and Social Development, the Arab Industrial Development Organization, the Arab Organization for Agricultural Development, the Council for Arab Economic Unity and the Organization of Arab Petroleum-exporting Countries. Discussions were held with the Arab Centre for the Studies of Arid Zones and Dry Lands with a view to co-ordinating the activities of the two organizations, and possibly sponsoring joint activities.

20. The very fruitful co-operation between UNEP and the Arab Gulf Fund for United Nations Development Organizations (AGFUND) which was initiated in 1982 [10] continued throughout 1983. By the end of the year, AGFUND had pledged a total of US$ 930,000 to support 15 projects addressing serious environmental problems in 15 different developing countries. The AGFUND contribution has become one of the pillars of the clearing-house programme.[11]

21. In the Americas, UNEP continued its co-operation with the Organization of American States, primarily through the UNEP Regional Office for Latin America and the Caribbean, and in a co-operative project. The implementation of the Caribbean Action Plan, another part of the regional seas programme, is progressing with the co-operation

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8 See below, chapter IV, paragraph 216.

9 See below, chapter IV, paragraph 212.

10 UNEP/GC.11/2, chap. III, paras. 30-31.

11 Further information on the clearing-house, and specifically on the role AGFUND is playing in this area, is contained in the Executive Director's progress report (UNEP/GC.12/4).

of the Caribbean Community.[12] Another co-operative project in 1983 with the Caribbean Community concerned protection of the marine and coastal environment of the Caribbean islands. Chapter IV below contains references to a number of other joint projects with intergovernmental organizations in the Latin American and Caribbean region, such as the environmental assessment project being conducted jointly with the Salto Grande Joint Technical Commission.[13]

22. In Asia and the Pacific, UNEP has continued its co-operation with the South Asia Co-operative Environment Programme (SACEP), which was established as a result of a UNEP initiative. The first session of the Governing Council of SACEP was held in January 1983; UNEP was represented by an observer. The Director of the SACEP secretariat attended a seminar on reforestation and tree planting in the Netherlands, with UNEP support provided in pursuance of Governing Council decision 11/7, part eight, section C, on "Year of the Trees (1988) for Asia and the Pacific".

23. UNEP has maintained its close relations with the Association of South-east Asian Nations (ASEAN), particularly with regard to the ASEAN Environment Programme adopted at the First ASEAN Ministerial Meeting on the Environment in May 1981. A total of 10 national heritage parks and sites have been identified in the ASEAN countries, and master plans for their development, management and operation are being formulated by the member countries, with the active assistance of UNEP. During 1983, UNEP was also co-operating with the South Pacific Commission in the implementation of an action plan for managing the natural resources and environment of the south Pacific region.

24. The co-operation described in the preceding paragraphs represents only a small part of the considerable range of UNEP co-operation with intergovernmental organizations. UNEP collaborates closely with a large number of regional intergovernmental organizations which have an interest in the environment, particularly through its regional offices, and this co-operation has proved to be of benefit to all concerned. Additionally, UNEP has joint programmes with several global intergovernmental organizations such as the Commonwealth Secretariat.

4. RELATIONSHIP WITH INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS

25. UNEP has always enjoyed a very special relationship with non-governmental organizations (NGOs) active in the field of the environment. It was largely due to their initiative and impetus that UNEP came into being. In both of the milestone meetings concerning UNEP, the Stockholm Conference in 1972 and the Governing Council session of a special character in 1982, the NGOs played a prominent role.

26. During 1983, UNEP had nearly 40 ongoing projects with NGOs; references to a number of them are to be found in chapter IV, particularly in the sections on environ-

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12 See below, chapter IV, paragraph 214.

13 See below, chapter IV, paragraph 180.

ment management and supporting measures.[14] Throughout the year under review, the most effective channel between UNEP and environmental NGOs continued to be the Environment Liaison Centre (ELC), with which UNEP had several joint projects during the year.

27. UNEP continued its decade-long close co-operation with IUCN in 1983, as is evidenced by the fact that over 15 projects were being carried out by IUCN with UNEP support, in addition to a further 8 projects with the IUCN Scientific Committee on Problems of the Environment (SCOPE). Co-operation with IUCN in the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora also continued, with UNEP providing support to the international secretariat for the Convention.

28. Other projects during the year involved such traditional NGO partners of UNEP as the World Wildlife Fund (WWF) and the International Institute for Environment and Development (IIED). The Director of the UNEP Regional Office for Europe regularly meets the directors of WWF and IUCN for discussions and stock-taking of current co-operative efforts, particularly with regard to the implementation of the World Conservation Strategy. UNEP, together with representatives of IUCN, WWF and the Canadian sponsoring organizations, is also on the steering committee for the planned conference on the implementation of the World Conservation Strategy, scheduled to be held in Ottawa in 1986.

29. Following the Governing Council's decision to support the Executive Director's plan to convene a parliamentary conference on the environment, jointly with the Inter-Parliamentary Union,[15] co-operation between the two organizations was intensified in 1983, first and foremost in connection with the convening of the conference, which is scheduled for late 1984.

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14 Part of the section on information activities deals specifically with co-operation with NGOs (see chapter IV, paragraphs 261-263).

15 Decision 11/1, section VI; information on the progress of preparations for the conference is contained in the Executive Director's introductory report (UNEP/GC.12/3).

Chapter IV

THE ENVIRONMENT PROGRAMME

1. In keeping with the pattern established in the 1982 Annual Report, the present chapter is designed to give an abbreviated indication, rather than a comprehensive description, of all the projects and activities implemented by UNEP in 1983. An attempt has been made to trace major developments, both positive and negative, during the year under review in each of the programme areas. In order to obtain a complete picture of projects and activities in 1983, this chapter should be read in conjunction with *Report to Governments* as well as with annex III (Publications and papers issued in 1983) and annex IV (Meetings held in 1983) to the present report.

2. The organization of the material in this chapter follows the pattern laid out in the medium-term plan for 1982-1983, which was submitted to the Council at its ninth session.[1] As the medium-term plan clearly spells out objectives, strategy elements and dates for each budget line and subline, it is the best bench-mark for evaluating the activities of the environment programme in 1983.

A. ENVIRONMENTAL ASSESSMENT: EARTHWATCH

3. Good management presupposes a prior process of assessment, and this holds true in the field of the environment as much as in any other field. At UNEP, Earthwatch is the assessment arm of the environment programme. The definition and purpose of Earthwatch were described in some detail in the 1982 Annual Report.[2] But now Earthwatch is entering a new era. Whereas in its first, formulative years, its major task was to ensure the acquisition of reliable and comparable data, "the effectiveness of Earthwatch over the next decade will be a function of its ability to handle and communicate the information which it is now obviously competent at acquiring".[3] In other words, Earthwatch is now seeking to go beyond the academic exercise of gathering data into packaging such information in an attractive and understandable form and disseminating it to key decision-makers as a basis for environmental management.

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1 UNEP/GC.9/6. Starting with the 1984 Annual Report, the programme chapter will be organized along the lines of the system-wide medium-term environment programme (UNEP/GC.10/7 and Corr.1), which covers the period 1984-1989.

2 UNEP/GC.11/2, chap. IV, paras. 4-6.

3 This view, put forward by the UNEP secretariat in a review of environmental assessment activities (UNEP/WG.30/3, para. 158), was subsequently endorsed by a working group of government experts on the subject.

1. MONITORING: THE GLOBAL ENVIRONMENTAL MONITORING SYSTEM (GEMS)
(Budget subline 1301)

4. At the heart of Earthwatch is GEMS, an international effort to acquire, through monitoring, the data that are needed for the rational management of the environment. Monitoring may be carried out for a wide variety of purposes, but the main objectives of GEMS are the following:

(a) To detect significant changes in the environment;

(b) To study levels and trends of environmental indicators for the purpose of deciding upon and planning corrective action;

(c) To check on compliance with established environmental quality criteria and standards;

(d) To check on the efficiency of control systems and corrective measures;

(e) To survey and study the effects of environmental changes, in particular on man's health and food supply and on natural resources;

(f) To study the effects of specific human activities on the environment, so as to determine whether alternative patterns of activity would be more appropriate;

(g) To collect time series of data on a number of variables in order to identify cause-effect relationships between them.

5. The current activities of GEMS are divided into five major programmes: (a) renewable natural resource monitoring; (b) climate-related monitoring; (c) health-related monitoring; (d) monitoring of the long-range transport of pollutants; and (e) ocean monitoring.

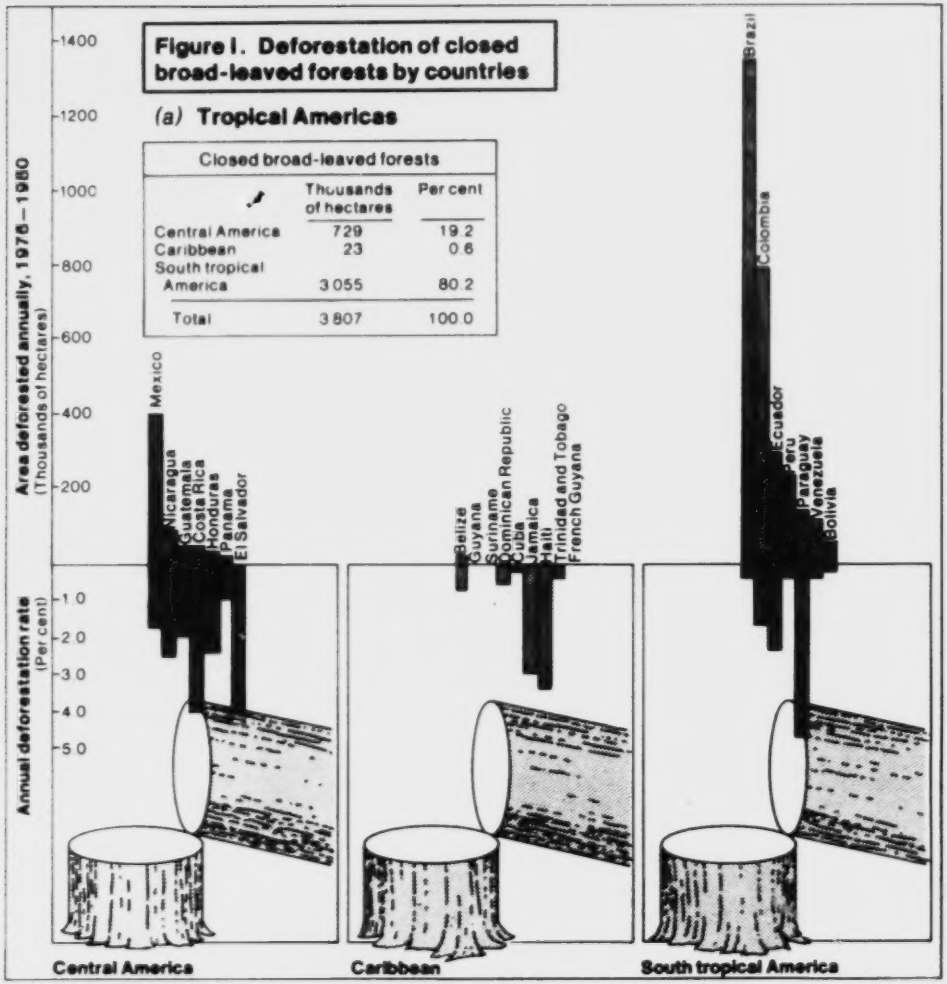
(a) Resource monitoring

6. During the year under review, UNEP continued its investigations into the feasibility of establishing a global resource information data base. Sectoral and *ad hoc* expert working groups examined the desirability and logistics of a global system which would compile, in a geographically referenced form, the many data sets which have been collected within GEMS monitoring networks. Preliminary designs specify a system by which national and regional planners and managers will be supplied with complex sets of environmental information in easily usable form while building up capabilities for handling environmental data at the national level.

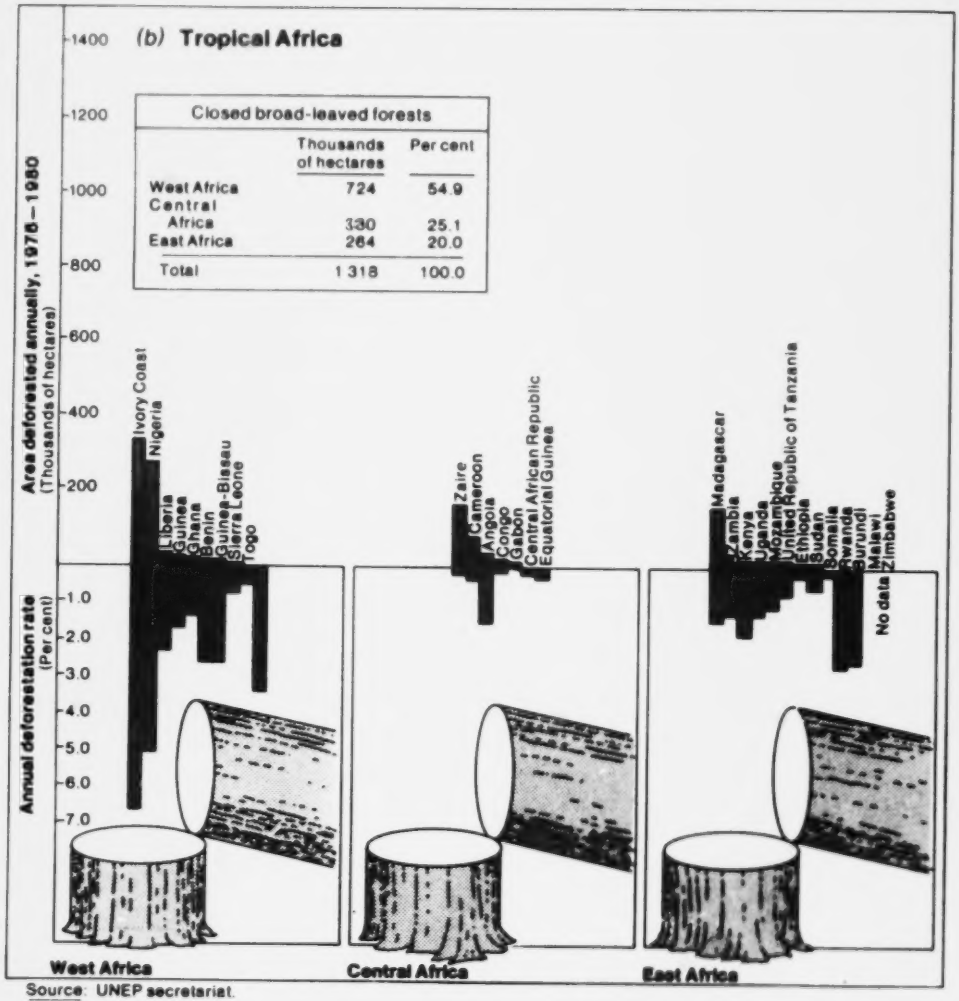
7. To give an illustration of how environmental data of the sort that will be stored in the global data base may be analysed, data from the Global Assessment of Tropical Forest Resources [4] were analysed by country to furnish, *inter alia*, a comparison of rela-

4 "The Global Assessment of Tropical Forest Resources", GEMS PAC Information Series, No. 3 (Nairobi, UNEP, 1982); *Tropical Forest Resources*, FAO Forestry Paper No. 30 (Rome, FAO, 1982).

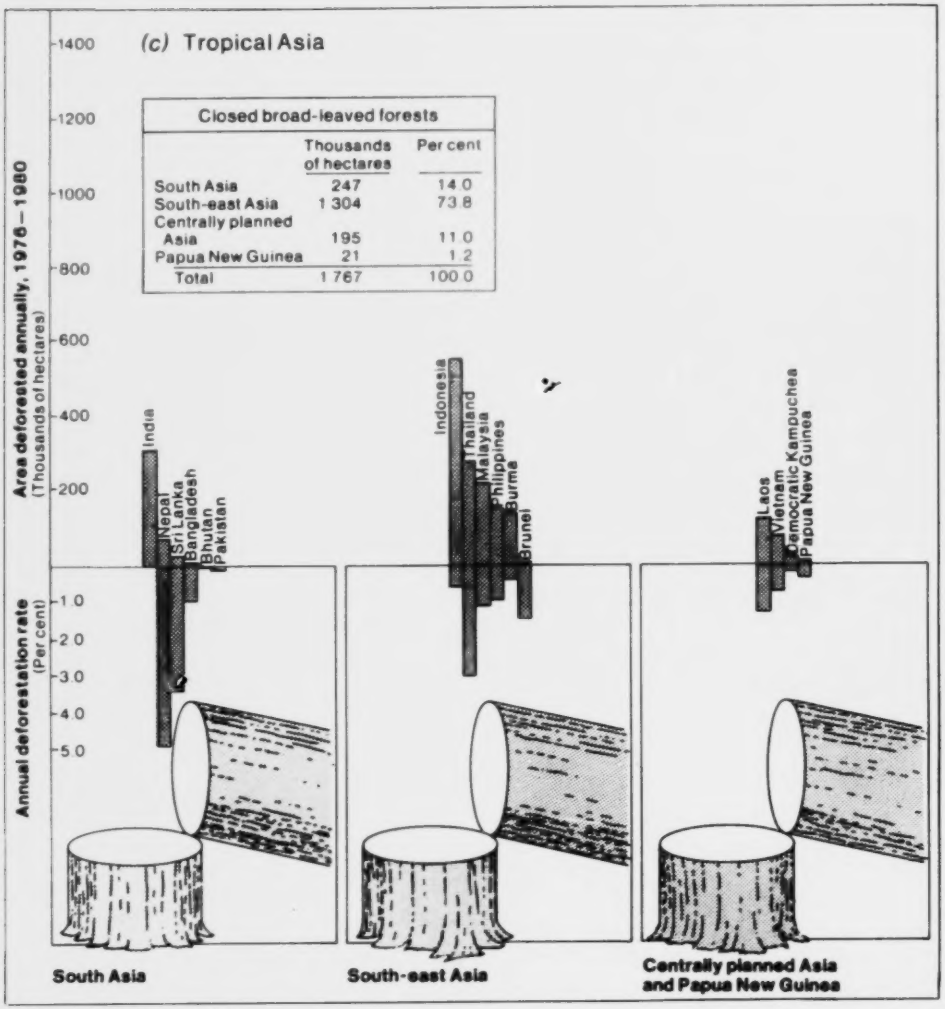
tive and absolute rates of deforestation (see figure I (a), (b) and (c) below). Such analyses are central to the production of environmental assessments.



Source UNEP secretariat



Source: UNEP secretariat.



Source: UNEP secretariat.

8. The pilot project on the inventory and monitoring of Sahelian pastoral ecosystems in Senegal [5] continues to demonstrate the usefulness of GEMS-style ecological monitoring to west Africa. A workshop for the region, held in November, was attended by rangeland practitioners from throughout the Sahelian zone. There was widespread agreement on the soundness and relevance of the theory of rangeland monitoring. What remains now is to translate this theory into actual practice.

9. As a result of co-operation with the United States National Aeronautics and Space Administration (NASA) useful space data on primary production have been made available for various projects, including the project in the Sahel. These data have subsequently been field-tested for reliability. For example, an intensive field and aerial exercise in the Kora Game Reserve, Kenya, brought NASA staff into operational contact with a Royal Geographical Society/National Museums of Kenya expedition in which ground data gathered by the expedition were used to interpret and corroborate satellite images. Advanced very-high-resolution radiometer data from the NOAA 6 and 7 satellites show considerable promise for monitoring seasonal vegetation changes at scales ranging from local to continent-wide.

10. In 1983, two new resource monitoring projects were initiated in south America. In a project in Peru [6] the dynamics of forest and surrounding ecosystems in the High Sierras are being examined in order to gain better understanding of processes of land degradation. In the Torres del Paine biosphere reserve in southern Chile the behaviour of pollutants in relatively untouched temperate mixed forests is being examined, with the assistance of WMO and UNESCO,[7] and the results will be compared to those of ongoing monitoring projects in ecologically similar biosphere reserves in the United States.

(b) Climate-related monitoring

11. During 1983, more analyses have been completed of data furnished by the UNEP/WMO Background Air Pollution Monitoring Network (BAPMoN).[8] Over the past 10 years, BAPMoN, one of the world's largest air monitoring networks (see figure II), has amassed a unique and enormous data set. However, the low sampling frequency in time, and the probable contamination of many samples by sea-salt at isolated island stations, have led to problems in the statistical analysis of the data. It has proved impossible to infer any relationship between the acidity and chemical content of samples at many BAPMoN stations, and substantial numbers of precipitation samples from stations are currently being contaminated from sea-salt or soil-derived sources. Thus it appears that the data currently reported by many of the stations are not sufficiently reliable to serve as indicators of long-range atmospheric transport and deposition. These findings have prompted a critical reassessment of sampling procedures within the network.

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5 FP/1301-79-01.

6 FP/1301-83-02.

7 Under project FP/1301-83-01.

8 C. Hakkarinen, "General consideration and examples of data evaluation and quality assurance procedures applicable to BAPMoN precipitation chemistry observations", Environmental Pollution Monitoring and Research Programme Report No. 17 (Geneva, WMO, 1983).

Figure II. UNEP/WMO Background Air Pollution Monitoring Network (BAPMoN)

● Stations reporting precepitation chemistry data

APRIL 1982

(c) Health-related monitoring

12. Analysis of data from the health-related monitoring networks has continued apace. The results will not only contribute to assessments of the impact of pollutants on man, but will permit an assessment of the monitoring effort itself, with a view to improving its efficiency and making it more cost-effective, particularly in view of the increasing importance of health-related monitoring in the developing world.

13. The joint UNEP/WHO project on the assessment of human exposure to pollutants through biological monitoring,[9] which produced results for the heavy metals component last year, has now published findings on organochlorine compounds. Before actual monitoring began, the data were tested to make certain of their reliability; the analysis continued to the end of 1980. The general observation is that levels of organochlorines, including dichlorodiphenyltrichloroethane (DDT), in human milk, decreased over the nine-year period in those (largely industrialized) countries which restricted or prohibited the use of DDT a decade ago (see figure III (a) and (b) below). The industrialized countries in the project tended to have lower levels of DDT, dichlorodiphenyldichloroethylene (DDE) and hexachlorocyclohexane (HCH) in milk fat than more agrarian countries. In the case of polychlorinated biphenyls, however, countries such as the Federal Republic of Germany and Sweden have higher levels than other industrialized countries.

14. The Monitoring and Assessment Research Centre (MARC) at Chelsea College in the University of London prepared for UNEP and WHO an analysis of air pollution concentrations in selected urban areas between 1973 and 1980.[10] In cities with monitoring sites which produced more than five years' data, the general trends for both sulphur dioxide and suspended particulate matter (SPM) were downward (see figure IV (a), (b) and (c) below). About half the sites showed sulphur dioxide levels lower than those stipulated in the WHO guidelines. Somewhat more than half the sites had levels above the guidelines with respect to SPM, but only about 20 per cent of all commercial sites exceeded the guidelines for both substances simultaneously. Certain seasonal differences were noted: for example, sulphur dioxide levels tend to increase slightly during colder months, but they are not necessarily correlated with smoke levels. The lack of relationship is also noted between SPM and smoke, indicating that there are other causal factors besides fossil fuel burning, such as the burning of refuse, poorly adjusted oil burners in space and water heaters, dust-generating wind, traffic and construction, etc. The general decrease in air pollution concentrations is attributed to the installation of emission reduction systems, the use of low-sulphur fuels, the enactment of oil conservation policies and the use of higher chimneys.

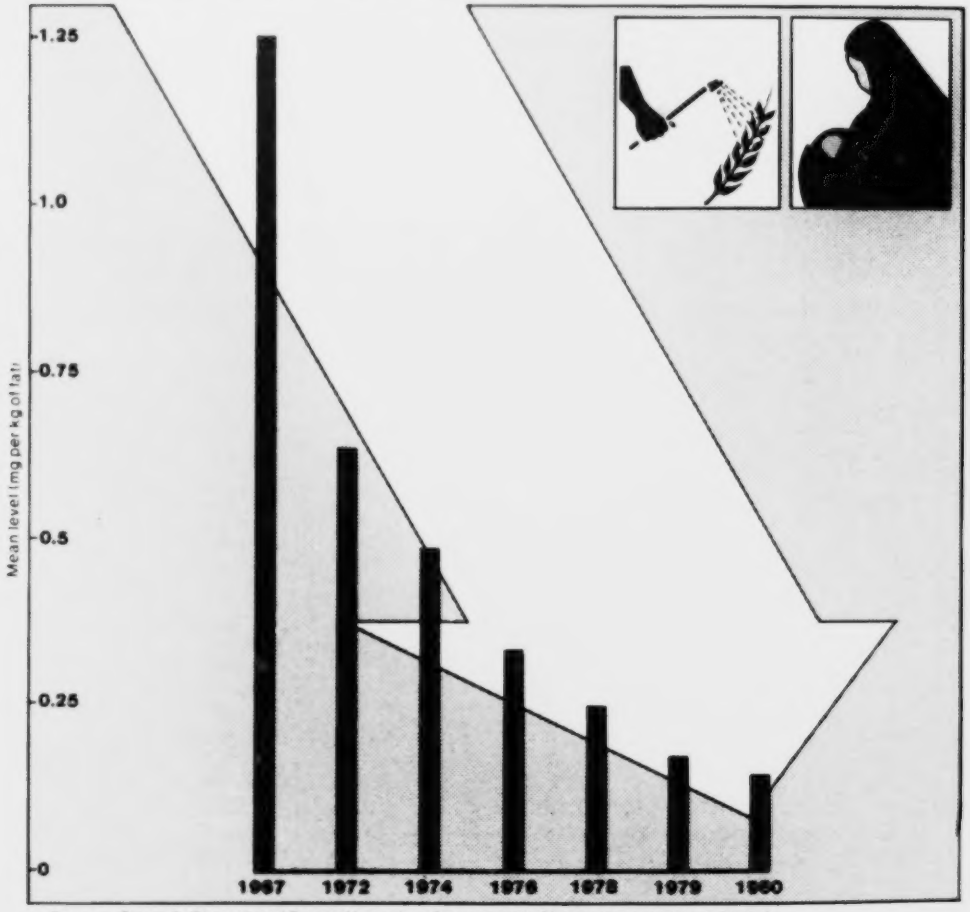
15. At a government expert review of health-related monitoring in 1982,[11] the experts suggested that global water quality monitoring should give emphasis to drinking as well as "natural" waters. Consequently, at an interregional review meeting held in Burlington, Canada in October 1983, the participants examined the status of the GEMS water

9 FP/1301-78-06.

10 MARC, "Air pollution concentrations in selected urban areas 1973-1980" (London, 1983).

11 See UNEP/GC.11/2, chapter IV, paragraph 16.

Figure III *(a)*. **Mean levels of p,p' – DDT in pooled samples of human milk from the Mothers' Milk Centre in Stockholm, 1967-1980**

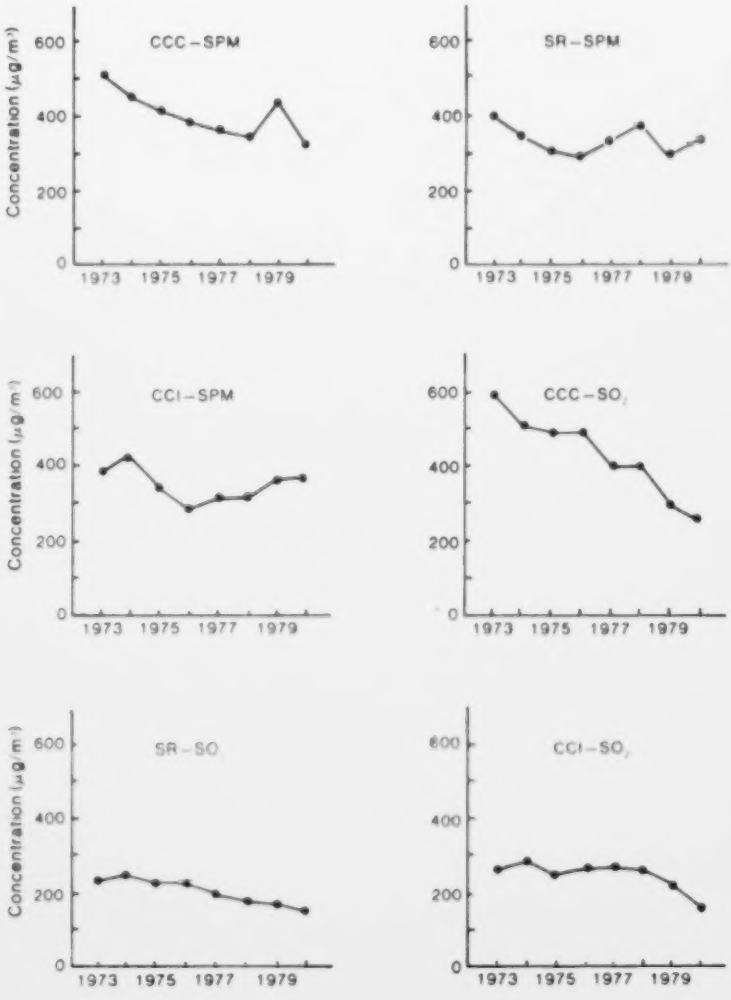


Source: Stuart A. Slorach and Reggie Vaz, eds., "Assessment of human exposure to selected organochlorine compounds through biological monitoring" (Uppsala, Swedish National Food Administration, 1983).

Figure III *(b)*. Median levels of p,p' – DDT in human milk fat. Data for all mothers studied. The median level reported by the United States was below the limit of detection of the method used there (0.1 mg per kg of fat)

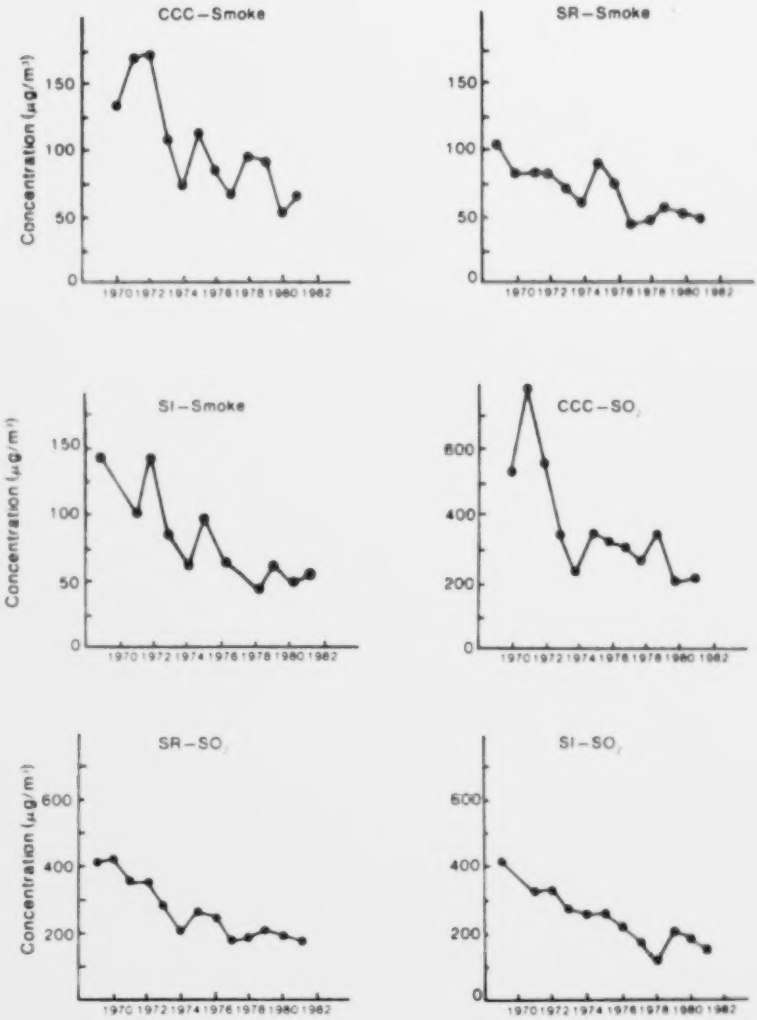
Source As for figure III *(a)*.

Figure IV *(a)*. Trends in suspended particulate matter (SPM) and SO_2 levels in Zagreb between 1973 and 1980 at centre-city commercial (CCC), suburban residential (SR) and centre-city industrial (CCI) sites



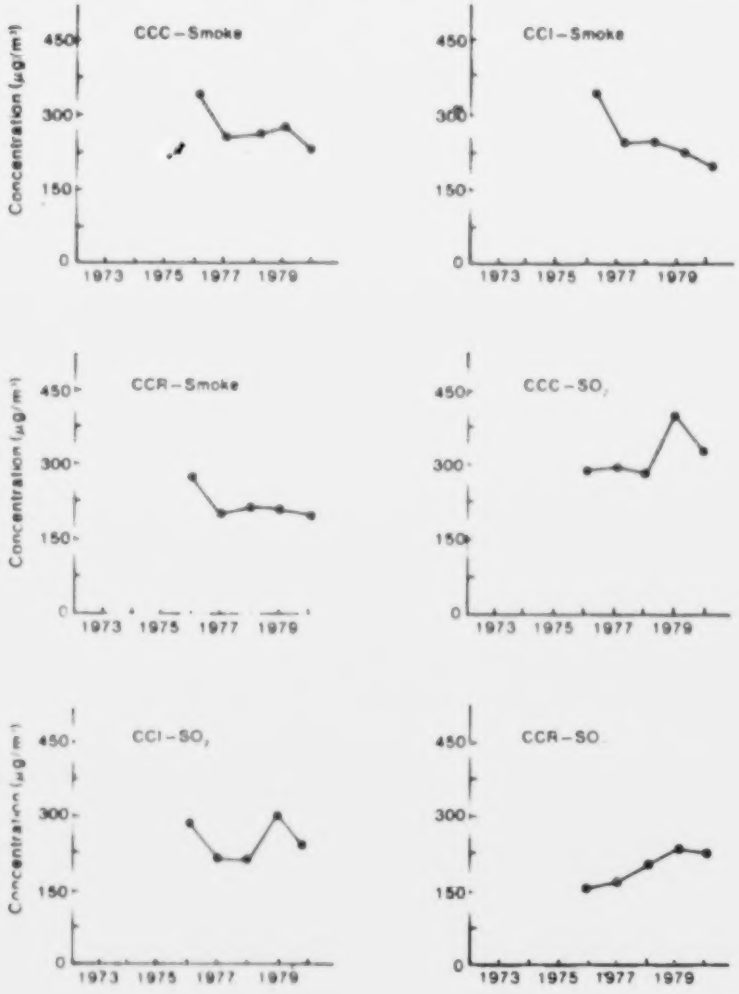
Source MARC, "Air pollution concentrations in selected urban areas 1973-1980" (London, 1983).

Figure IV *(b)*. Trends in smoke and SO_2 levels in Brussels between 1969 and 1981 at centre-city commercial (CCC), suburban residential (SR) and suburban industrial (SI) sites



Source As for figure IV *(a)*

Figure IV (c). Trends in smoke and SO_2 levels in Sao Paulo between 1976 and 1980 at centre-city commercial (CCC), centre-city industrial (CCI) and centre-city residential (CCR) sites.



Source As for figure IV (a)

programme and the integration of water quality monitoring into the activities to be conducted at the proposed Health Exposure Assessment Locations, which are to be established to co-ordinate monitoring and assessment of exposure to various sources. There was general agreement that the number of variables collected in the current monitoring programme could be reduced, but at the same time it was recommended that, in order to achieve comprehensive representation with respect to ranges in climate, urbanization and industrialization, the number of Health Exposure Assessment Locations should be increased from the 15 originally proposed to 27.

(d) Monitoring of the long-range transport of pollutants

16. Monitoring of the movement of airborne pollutants across national boundaries continues. Extension of the programme to developing countries where the extent of the acid rain problem is as yet unascertained, in accordance with Council decision 11/1, has been hampered by lack of resources. Now that the issue of acid deposition has taken on more impressive international dimensions, monitoring with a view to global and regional assessments of the problem is particularly crucial. Only systematically collected, geographically referenced data, combined with research into the effects of acid precipitation on recipient ecosystems, can provide useful guidelines for environmental management. This, of course, is in keeping with the basic philosophy of Earthwatch.

17. An expert meeting on the meteorological aspects of the second phase of the European Monitoring and Evaluation Programme, under which the long-range transport of airborne pollutants is being monitored, was held in Darmstadt, Federal Republic of Germany, in October 1983.[12] The experts examined in detail the results obtained from data collection and modelling of the behaviour of sulphur dioxide by the co-operating Meteorological Synthesizing Centres in Moscow and Oslo. In general, model predictions compared well with observed data, but there is a need for both to be further refined. There was some indication that emission inventories from eastern European countries need updating, and there was a dearth of monitoring stations in the whole of the southern European fringe. The programme, which has been developed in conjunction with ECE, needs to be continued and expanded, particularly in view of the recent damage sustained by European forests. The wealth and uniqueness of the scientific material accumulating at the two centres, as well as at the Chemical Co-ordinating Centre (also in Oslo), make it imperative to organize the data in a data bank which should be accessible to all scientists, both for research and for continuing environmental assessments.

(e) Ocean monitoring

18. At an International Symposium on Integrated Global Ocean Monitoring held in Tallinn, USSR, in October 1983,[13] technical reports of the current state of ocean monitoring activities were reviewed. The importance of global ocean monitoring was highlighted, and participants called in particular for the merging of plans to monitor physical and

12 Under project FP/1301-78-05.

13 Under project FP/0501-83-01.

ecological parameters. The monitoring of sea surface temperatures from co-ordinated satellite and ship observations was also felt to be important. The representatives of developing countries at the Symposium called for special mention of the potential usefulness of the UNEP regional seas programme in relation to global ocean monitoring. The Symposium was a productive first step towards global ocean monitoring, but it was recognized that such monitoring would require careful planning, which could take some time.

2. INFOTERRA
(Budget subline 1302)

19. INFOTERRA, the international referral system established in response to recommendation 101 of the Stockholm Conference to facilitate the exchange of environmental information, had by 1983 grown to a network of 119 partner countries, of which 97 were in the developing world.

20. During 1983, nearly 6,000 users from over 90 countries made use of the information services provided by the network, a 20 per cent increase over the previous year. INFOTERRA has thus responded to growing world demand for accurate, relevant information needed for sustainable development, particularly with regard to environmental planning, technology and science.

21. The 1983/1984 edition of the *INFOTERRA International Directory of Sources* lists over 9,500 sources of information from 84 countries on over 1,000 environmental topics; nearly a third of these sources are in developing countries. Regional breakdowns of the total number of queries processed since 1977 and the total number of sources listed in the 1983/1984 *Directory* appear in figure V below.

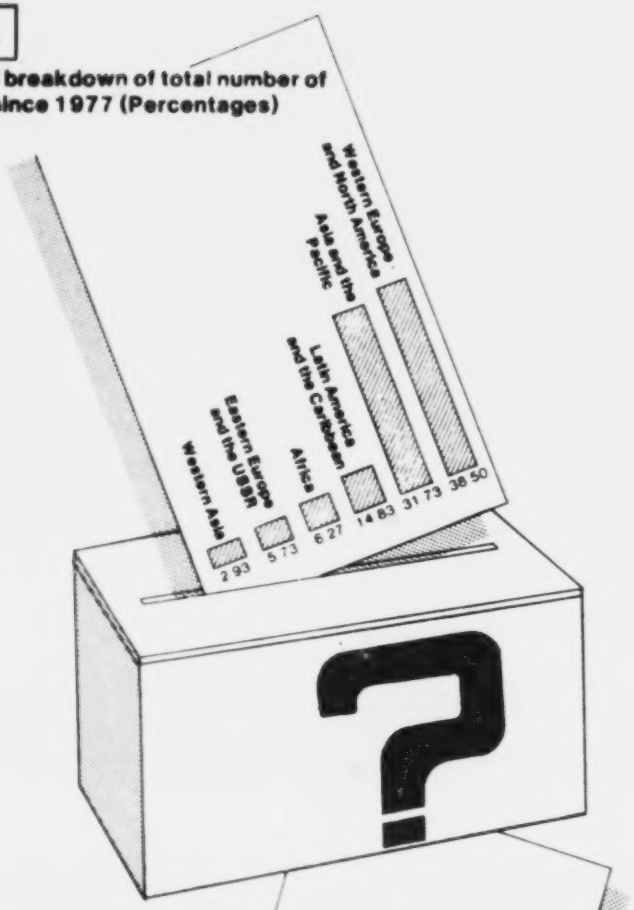
22. In 1983 INFOTERRA continued its effort to move beyond referral towards the provision of substantive information by network partners. To that end, UNEP, in co-operation with the INFOTERRA national focal point in the USSR, organized a training course on general information work for national focal point staff from 12 French-speaking countries in Moscow in October 1983 and, in co-operation with the Government of Brazil and ECLA/CLADES, held a similar course for staff from 15 Spanish-speaking countries in Brasilia in November/December 1983. A training course on basic INFOTERRA operations was held in Nairobi in August for participants from 11 English-speaking countries.

23. During 1983, more and more INFOTERRA national focal points were providing services beyond referral. The INFOTERRA Programme Activity Centre itself provided some substantive information in addition to referral services to every user that contacted it. Jointly with the UNEP Library, it prepared and distributed bibliographies on UNEP Governing Council documentation and on the 1972 UN Conference on the Human Environment.

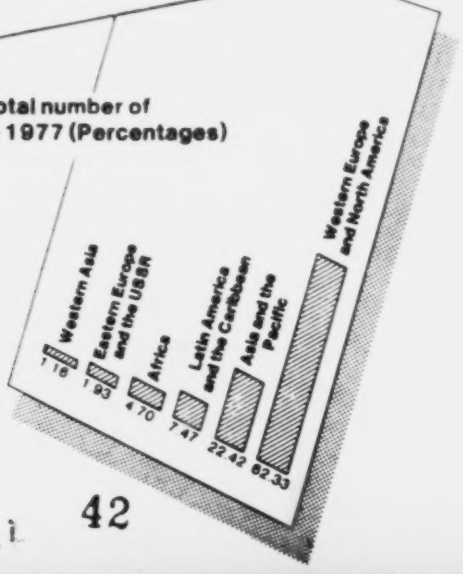
24. A particularly important event for the further development of INFOTERRA was the holding of the first meeting of the INFOTERRA Advisory Committee in Athens in October 1983. After reviewing achievements and weak points, the Committee made a number of suggestions about future work, the foremost of which dealt with the establishment of a network of special sectoral sources to provide packaged information in priority

Figure V.

Regional breakdown of total number of queries since 1977 (Percentages)



Regional breakdown of total number of sources registered since 1977 (Percentages)



environmental sectors; the provision of on-line information search services to selected users; and the improvement of INFOTERRA data presentation and procedures. The Committee also suggested that the INFOTERRA network should strengthen its arrangements for the provision of substantive information through the designation of regional and subregional service centres, and should enhance promotion activities to give INFOTERRA wider visibility.

25. As part of the promotion efforts UNEP, in conjunction with the Governments concerned, organized nine national seminars during 1983 to bring sources and potential users together and raise the level of environmental awareness among decision-makers.[14] INFOTERRA also took part in the further development of the environmental programmes approved by Latin American government experts in Buenos Aires in March 1983,[15] and especially the proposed project on environmental information exchange. It also participated actively in the establishment of the Global Network of Scientific and Technological Information which was proposed in 1980 by the UN Conference on Science and Technology for Development. Throughout the year, close contact was maintained with other UN information systems, as well as with national systems.

3. INTERNATIONAL REGISTER OF POTENTIALLY TOXIC CHEMICALS (IRPTC) (Budget subline 1304)

26. Increased awareness of the potential hazards associated with chemicals entering the environment in considerable numbers and quantities has led to numerous activities, both nationally and internationally, since the Stockholm Conference on the Human Environment. New legislation has come into force to regulate chemicals in their various uses, and international programmes have been initiated, aimed at harmonization of national regulatory requirements and hazard assessment procedures for chemicals. Health criteria documents and similar evaluation reports on many chemicals of international concern have been prepared and published. Developing countries have found themselves in an increasingly difficult situation because of the increasing international trade in chemicals, on the one hand, and the increasing complexity of the issues of regulation, assessment and control of health and environmental hazards from chemicals on the other.

27. In the field of information exchange on chemicals, significant developments have also taken place. Many national and international activities have been initiated with the aim of facilitating access to information relevant to hazard assessment and control. IRPTC has become firmly established. Its main objective has been, and continues to be, to assist Governments and others entrusted with responsibility for protecting human health and the environment from noxious effects of chemicals by supplying relevant information and data for evaluating (and eventually, if possible, predicting) the hazards associated with particular chemicals.

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14 The seminars appear in the list of meetings held in 1983 (annex IV).

15 See the final report of the Meeting of Government-nominated Experts on Regional Environmental Programmes in Latin America and the Caribbean (UNEP/IG.40/6).

28. During 1983, IRPTC continued to update its loose-leaf manual entitled "International Register of Potentially Toxic Chemicals—Part A" and distribute it to the national correspondents and other partners of the IRPTC network. It has also continued to develop its computerized files, with the active assistance of several national correspondents, specialized scientific institutions and expert consultants, and industry. Data profiles on approximately 400 chemicals of international significance are now stored in the IRPTC data bank, and are available through the IRPTC Query-Response Service.

29. The IRPTC Legal File, which contains data on national and international regulatory measures and recommendations for hazard control on 400 chemicals covering 12 countries and 6 international organizations, was updated in 1982 and published in 1983.

30. In 1983, the Query-Response Service received queries on chemicals from developed and developing countries at a rapidly increasing rate. From 100 queries received in 1982, the figure rose to about 225 in 1983. Of these, 36 per cent came from developing countries. The major interest was in agrochemicals, which accounted for 45 per cent of the queries. The information requested concerned various aspects of toxicity to human health and the environment, waste and spill management and regulatory measures, frequently involving more than one chemical at a time.

31. Three issues of the *IRPTC Bulletin*, which is distributed to approximately 8,500 corporate and individual addresses all over the world, were published in 1983. In cooperation with the USSR, IRPTC continued to issue the series of "Scientific reviews of Soviet literature on toxicity and hazards of chemicals", which now comprises 48 publications. Furthermore, two reference books and a monograph on chemicals were translated into English and published under this co-operative scheme in 1983. An international directory of information sources related to chemical safety has been compiled jointly with INFOTERRA and is scheduled for publication in 1984.

32. A two-month international post-graduate training course in preventive toxicology was held in the USSR during 1983 for 20 participants, mainly from developing countries, involved in national chemical hazard assessment and control schemes. Subsequently, an evaluation meeting was held in Moscow to discuss the results of the course and prepare recommendations for future activities. It was noted with satisfaction that the trainees were of the unanimous view that the knowledge they had gained would undoubtedly benefit them in their future work. The meeting recommended that such courses should be held regularly, and that the training material should be consolidated into a manual for ease of use. It also recommended that emphasis should be placed in future courses on the study and use of IRPTC data files, IPCS (International Programme on Chemical Safety) environmental health criteria documents and similar evaluative reviews of chemicals.

33. An international expert meeting on basic principles of definition of toxicological and safety data for chemicals in international trade was held in in Moscow in December 1983. The experts formulated a series of recommendations aimed at harmonizing safety data sheets and information exchange procedures for chemicals in international trade.

34. In response to Governing Council decision 10/15, IRPTC revised and updated the

UNEP list of environmentally dangerous chemical substances and processes. An expert meeting convened in Geneva in November 1983 reviewed the revised list in the light of comments received from Governments, international organizations and scientific institutions, and prepared recommendations for consideration by the Executive Director.[16]

35. Following recommendations made by the Programme Advisory Committee of IPCS, IRPTC has become actively involved in the drafting of short health risk evaluation documents, the preparation of feasibility studies on the establishment of data bases on current research and existing criteria documents on chemicals, and the development of procedures and data for evaluating the effects of chemicals on the natural environment. IRPTC maintains intensive working contacts with the IPCS Central Unit for this purpose.

36. In 1983, IRPTC, in collaboration with ILO, updated the ILO publication *Occupational Exposure Limits for Airborne Toxic Substances*.[17] The data in this publication, on over 1,100 substances from 19 countries and 1 international organization, are being entered into the IRPTC computerized system for easy updating and retrieval, and will be available for publication in 1984.

37. IRPTC contributed to the implementation of General Assembly resolution 37/137 on protection against products harmful to health and the environment, and provided information from its Legal File on national restrictive regulatory measures on chemicals. It also participated in the preparation of a draft code of conduct on the distribution and use of pesticides which is being developed under the auspices of FAO. In response to Governing Council decision 8/8, a handbook on *Management of Hazardous Waste*[18] was completed and published in 1983 jointly with the WHO Regional Office for Europe. Copies will be distributed to delegates to the twelfth session of the Governing Council.

38. OECD continued to develop its Chemical Programme and its Special Programme for the Control of Chemicals during 1983. IRPTC played an active part in several OECD projects, particularly those related to the programme on existing chemicals.

4. OUTER LIMITS
(Budget subline 1303)

39. Under this subline attention has been concentrated during 1983 on two particular areas: risks to the ozone layer, and studies of the impacts of climate variability and change on man and the environment. With respect to the former, UNEP has continued the assessment of ozone layer depletion and its impacts and the co-ordination of related research activities under the World Plan of Action on the Ozone Layer. Considerable progress has also been made in drawing up a global framework convention for the protection of the ozone layer; the Environmental Assessment Service provided substantial technical information and data in this process. The progress of the *Ad Hoc* Working

16 The Executive Director is submitting a report on this subject to the Council in document UNEP/GC.12/16.

17 Occupational Safety and Health Series, No. 37 (Geneva, ILO, 1977).

18 WHO Regional Publications, European Series No. 14 (Copenhagen, WHO, 1983).

Group of Legal and Technical Experts engaged in work on the convention is described under budget subline 1002 (Environmental law).[19]

40. With regard to studies of the impacts of climate variability, a revised plan of action for the World Climate Impact Studies Programme (WCIP), one of the four components of the World Climate Programme co-ordinated by WMO, was recommended to the Executive Director by the Scientific Advisory Committee for WCIP. The progress made in the implementation of this plan is described below (paras. 41-48). Of particular importance is the renewed interest in CO_2-induced climatic change following the publication of results of studies by the Environmental Protection Agency and the National Academy of Sciences of the United States which forecast climatic change beginning as early as the 1990s, with a predicted temperature increase of about 2° C by the year 2000 and 5° C by 2100. Such temperature increases in the span of only a few decades represent an unprecedented rate of atmospheric warming which, if it materializes, is likely to be accompanied by dramatic changes in precipitation and storm patterns and a rise in the average global sea level. As a result agricultural conditions could be significantly altered, causing possible disruptions of environmental and economic systems and imposing strains on some political institutions. It must be pointed out that there is as yet no evidence of global warming; however, the increasing level of atmospheric CO_2 is a fact, as shown in the monthly record of CO_2 concentrations monitored at Mauna Loa BAPMoN station in Hawaii (see figure VI).

(a) Climate impact studies

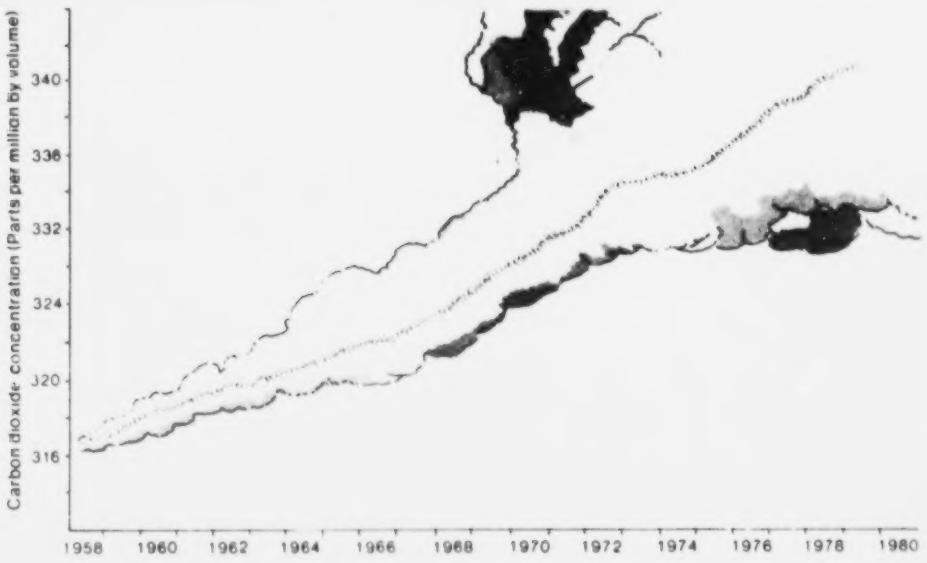
41. At the second meeting of the WCIP Scientific Advisory Committee, held in Dublin in January 1983, the WCIP plan of action was extensively revised to take account of the major financial constraints that had hindered development of the first phase in 1981-1982. The Committee recommended concentration on three main programme areas: studies of the impact of climate on food systems and agriculture; assessment of the impact of the increase of CO_2 in the atmosphere; and improvement of the methodology to be applied in climate impact studies. A comprehensive programme of activities was recommended for implementation during 1983-1985. A total of eight projects were to be continued or initiated in 1983, and this target was achieved. Two further projects concerned with climate impacts were developed and approved for implementation before the end of 1983.

42. One of the projects initiated in 1983 as part of WCIP involved the development of a scientific basis for assessing the impact of an increased concentration of atmospheric carbon dioxide on the interaction between the climate and the biosphere.[20] This project is being undertaken by the International Meteorological Institute (IMI) in Stockholm under the auspices of the Scientific Committee on Problems of the Environment (SCOPE), and is studying two related problem areas: the carbon cycle and future concentrations of carbon dioxide; and the impact of climate change on terrestrial ecosystems. IMI is also undertaking closely related activities in association with WMO and the World Resources Institute. The results of these projects are expected to provide a sound

19 See paragraph 233 below.

20 FP/1303-83-01.

Figure VI. Atmospheric carbon dioxide concentrations at Mauna Loa BAPMoN station in Hawaii



Source: United States National Oceanic and Atmospheric Administration

scientific basis for the future assessment of the CO_2-climate issue.

43. Another project initiated in 1983 deals with integrated approaches to climate impacts, and particularly the vulnerability of food production in marginal areas.[21] The project, being implemented in co-operation with the International Institute for Applied Systems Analysis (IIASA), with support from the Government of Austria, includes an investigation of the impact of climate on food production at the sensitive margins of food-grain and livestock production, using and testing new and improved methods of climate impact assessment.

44. Another new project in 1983, the International Satellite Land Surface Climatology Project,[22] is concerned with the development of methodologies for the utilization of satellite data in climate impact studies. As part of this project, more than 100 geophysicists and space scientists from 22 countries met in two UNEP-sponsored workshops to define a programme of research leading to the development of standard methodologies for converting satellite-measured radiances into quantitative data concerning the earth's surface.

21 FP/1303-83-05.

22 FP/1303-83-03.

45. As part of the approach to the second in a series of assessments of the role of carbon dioxide in climate variations and their impact, undertaken every five years (the first having been carried out in 1980), UNEP, in association with WMO and the International Council of Scientific Unions (ICSU), and with the support of the Government of Austria, held a study conference on the sensitivity of ecosystems and society to climate change at Villach, Austria in September 1983. Emphasis was placed on the special sensitivity of marginal aspects of ecosystems and vulnerable societies in cold areas and in dry areas. The results of the study conference are expected to make a significant contribution to the assessment of the CO_2-climate issue scheduled to be undertaken in 1985 in accordance with the plans approved by the Governing Council in decision 9/13 A.

46. An inventory of climate impact studies prepared by UNEP [23] has elicited a substantial favourable response, and a good deal of additional relevant material has been received from scientists and institutions. This material will be included in the second edition, to be published in 1984.

47. One of two further projects developed during 1983 was the holding of a Joint WMO/UNEP Regional Technical Conference on Climate for Latin America and the Caribbean in Colombia in November 1983.[24] This Conference, the third in a series of regional conferences on climate, discussed the current utilization of climatological data, information and knowledge with a view to improving the efficiency of major economic activities in the region, concentrating in particular on three problems of major interest: food production, energy and water resources. Panel discussions allowed an exchange of views on climate research and the impact of climate change and variability on human activities in the region. The Conference recommended that full benefit should be drawn from ongoing studies carried out as part of WCIP, and that use should be made in the region of the results obtained at the global level, particularly with regard to methodologies to be applied in impact studies.

48. Considerable concern is being expressed over the effects of the prolonged drought in Africa, which it is estimated now affects 34 out of 50 African countries. UNEP is supporting the Economic Commission for Africa (ECA) in holding a Scientific Round Table on the Climatic Situation and Drought in Africa. At a preparatory interdisciplinary meeting on the effects of drought on socio-economic systems in Africa, organized by UNEP in Nairobi in December 1983, participants reviewed the impact of drought on agricultural systems, water and energy resources, economic, social and political systems and the desertification process. They agreed on the general content of three overview papers to be submitted to the Scientific Round Table, and made proposals with regard to the recommendations to be included in a draft plan of action to combat the effects of drought in Africa. A report of the meeting is available from UNEP.

49. In December, representatives of UNEP, WHO and WMO met in Geneva with medical and climate specialists to plan future joint programmes in the area of climate and

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23 "Inventory of ongoing and planned climate impact studies and list of scientists involved in the research work" (UNEP, March 1983).

24 FP/1303-83-04.

health. Among the recommendations made was that the three organizations should sponsor a symposium on climate and human health in 1985.

(b) Risks to the ozone layer

50. The sixth session of the UNEP Co-ordinating Committee on the Ozone Layer was held in Geneva in April 1983,[25] to prepare a new assessment of ozone layer depletion and its impacts, based on the results of national research programmes. Among the Committee's more important conclusions was that current calculations estimate an ultimate reduction in the total ozone column of somewhere between 3 and 5 per cent, considering only emissions of chlorofluorocarbons 11 and 12 at their present rates. This is a drop from the 1981 predictions, resulting from new data on chemical reaction rates.

51. The above estimate has been confirmed by an assessment carried out by NASA in late 1983, although for the next few decades the assessment suggests that ozone column increases will outweigh decreases. One of the reasons for this is the injection of oxides of nitrogen into the upper troposphere and lower stratosphere by subsonic aircraft. The assessment, however, also points to major difficulties in predicting the evolution of the ozone column beyond the next few decades, arising from uncertainty concerning future atmospheric methane concentrations. If atmospheric methane continues to increase at a substantial rate, the combined effect of methane and fluorocarbons may result in no ultimate depletion of column ozone.

52. Previous estimates of column ozone depletion, made between 1974 and the present, are shown in figure VII below.

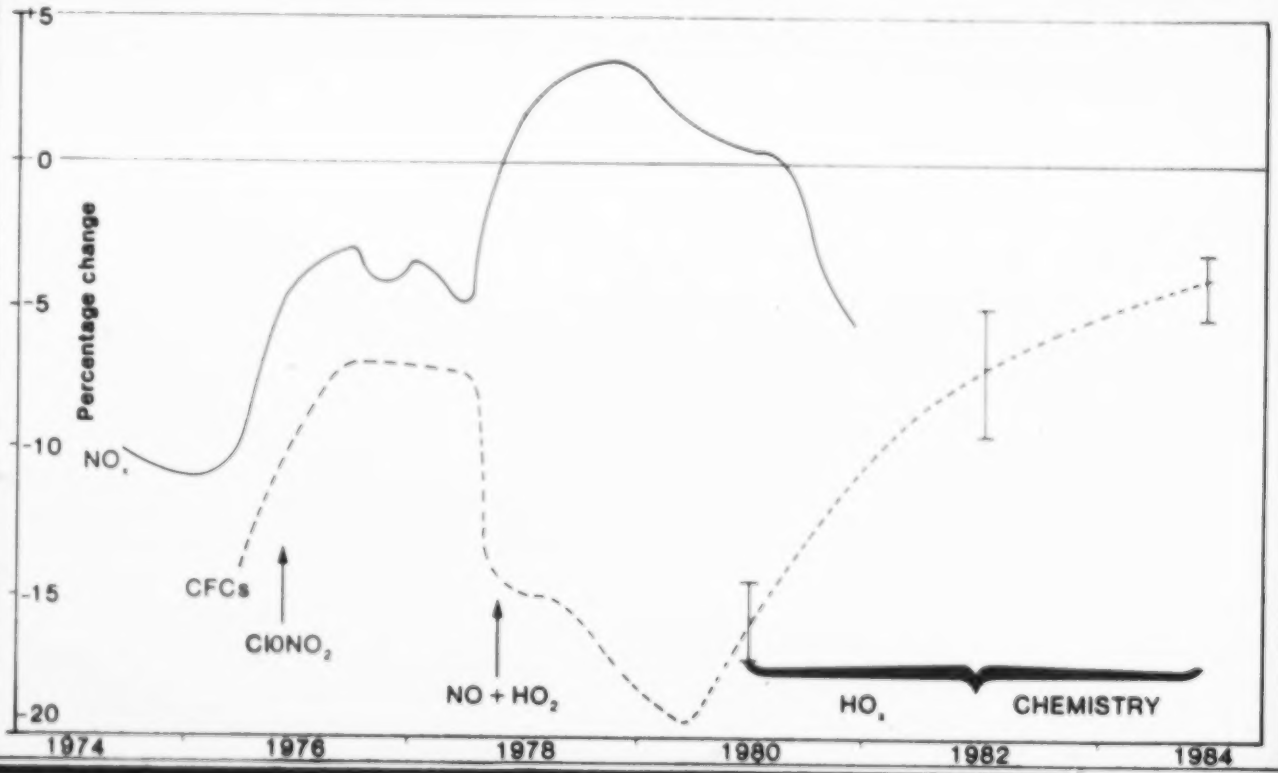
53. Notwithstanding the revised estimate for eventual ozone depletion, there are still grounds for concern about the consequences of increased UV-B radiation which would occur as a result of ozone depletion, especially with regard to agricultural production, fisheries and human health.

54. The Committee observed that distortion of the vertical ozone profile, as suggested by multiple-scenario models, might become more important than changes in the total amount as far as the possible future climatic implications were concerned. Calculations indicate that early next century the combined radiative effect of ozone and other trace gases on the surface temperature may be of the same order as that calculated for CO_2 at that time. A pictorial representation of the chemical and physical processes which determine the concentration of ozone in the atmosphere, and of the possible implications for global climate, is given in figure VIII.

55. A seventh session of the Committee is being tentatively planned for the last quarter of 1984, but the timing may well depend upon the requirements of the working group responsible for the ozone layer convention, which has indicated that the scientific basis for the convention will be the conclusions reached by the Committee.

25 Under project FP/1303-77-03.

Figure VII. Column ozone depletion predictions from 1974 to 1984



Source: "Present state of knowledge of the upper atmosphere—an assessment report" (United States National Aeronautics and Space Administration, January 1984).

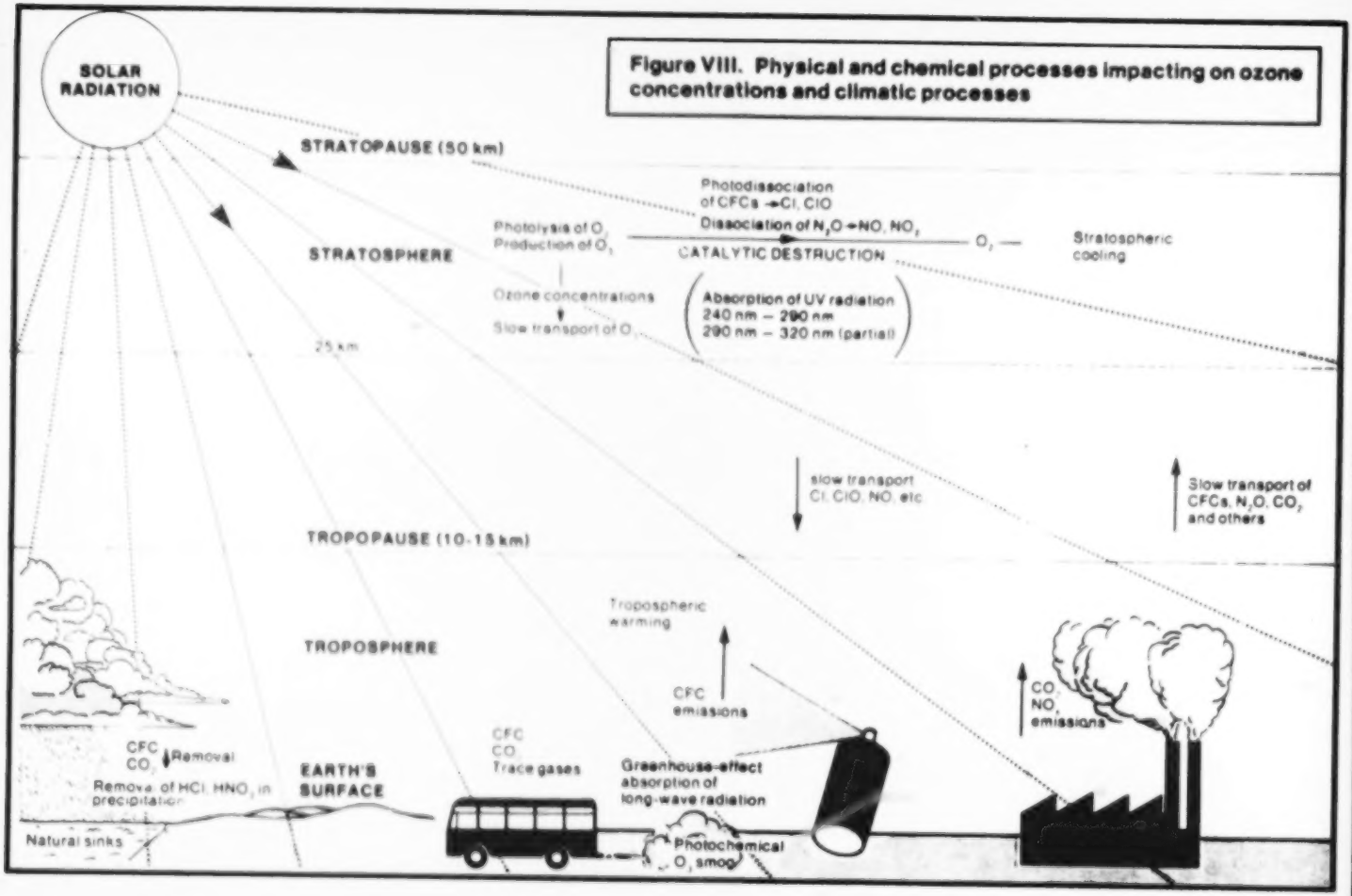


Figure VIII. Physical and chemical processes impacting on ozone concentrations and climatic processes

(c) Weather modification

56. Following the pre-programming activities under the precipitation enhancement project, which has been supported by UNEP, WMO decided not to embark on a precipitation enhancement experiment. Consequently, no activities are currently being undertaken in this field.

5. RESEARCH AND ASSESSMENT
(Budget subline 1305)

57. In pursuance of a recommendation made by the International Photosynthesis Study Group in 1982, steps were taken in 1983 to extend the collaborative photosynthesis study network co-ordinated by King's College in the University of London.[26] Arrangements are in hand for pilot study areas to be established in China, Mexico and Thailand in addition to the Kenyan site. A British manufacturing firm has donated equipment which will greatly assist in standardizing the studies at these sites. The reorganized and much strengthened panel of technical advisers to the Study Group held a meeting in Brussels in August 1983 and approved a standard methodology to ensure greater comparability of the assessments. The panel also authorized the publication of a review of the results of current international activities in the field of photosynthesis. The review, which has elicited an enthusiastic response from commercial publishers, will be published in co-operation with UNEP in 1984. Additionally, in response to a request from a number of Latin American Governments, a training course in plant productivity assessment is scheduled to be held in Fortaleza, Brazil in January 1984.

58. The 1982 General Assembly of SCOPE recommended a pause in the activities of the SCOPE/UNEP Nitrogen Unit, continuation of work on the sulphur cycle, jointly with the USSR Academy of Sciences, and further work on the survey of carbon transport in the major rivers of the world.[27] Specialist panels have continued the technical review of the accumulating results of the latter two projects, and it is expected that the results will be gathered together for publication in 1984. Financial constraints, however, have made it impossible to follow up proposals for study of the cycling of phosphorus and heavy metals.

59. The Monitoring and Assessment Research Centre (MARC) has continued to serve as an important focus of environmental research and assessment. It produced a report on analysis of GEMS urban air quality data (see paragraph 14 above), and continued preliminary investigation into the feasibility of exposure assessment at the ecosystem level. It also hosted several important GEMS-related meetings, including an *ad hoc* expert meeting to examine design criteria for a global resource information data base (see paragraphs 6 and 7 above), an inter-agency consultation on integrated monitoring and, in conjunction with the United Kingdom Department of the Environment, an expert meeting on environmental data (see paragraph 61 below).

60. The IUCN Conservation Monitoring Centre in the United Kingdom continued the

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26 Under project FP/1305-83-01.

27 Projects FP/1303-78-01, FP/1303-81-04 and FP/1303-79-01 respectively.

development of its computerized species and habitat data base. Information on endangered plant and animal species as well as their habitats, including parks and protected areas, are maintained in files which may be accessed for data or text to produce information on taxonomic groups or regional assessments. The data are currently aggregated at the national level; more precise geographical references are being added to the data base to make it compatible with the planned GEMS global resource information data base.

6. ENVIRONMENTAL DATA
(Budget line 1600)

61. In response to Governing Council decision 11/1, UNEP held a workshop on environmental data in October 1983 in London. The report of the workshop provided the basis for the Executive Director's report on the subject to the Governing Council at its twelfth session.[28]

62. Work was completed on a *Directory of Environment Statistics*, for publication early in 1984 by the United Nations Statistical Office with UNEP support.[29] The Directory serves as a guide to environmental data contained in statistical publications issued by individual countries and by members of the United Nations system.

B. ENVIRONMENTAL MANAGEMENT

63. The role played by Earthwatch as the assessment arm of the Environment Programme finds its counterpart in environmental management. Assessment is not an end in itself, but forms the basis for solid and scientifically grounded action, and that is the task of management. The subjects dealt with under environmental management are broken down into seven main headings, each of which covers one or more related programmes.

1. ENVIRONMENTAL ASPECTS OF HUMAN SETTLEMENTS PLANNING AND HEALTH OF PEOPLE AND THE ENVIRONMENT
(Budget line 01)

64. This budget line is composed of the following four programmes: environmental aspects of human settlements planning; human and environmental health; improvement of working conditions and of the working environment; and pest management systems.

(a) Environmental aspects of human settlements planning (budget subline 0104)

65. The rapid unplanned and uncontrolled growth of urban areas, sprawling over scarce land that is urgently needed for food production, is a problem faced by many developing countries and one that has numerous and severe environmental implications. The sheer size of the problem (see figure IX) is such that Governments find it difficult to plan, control and guide the development of human settlements.

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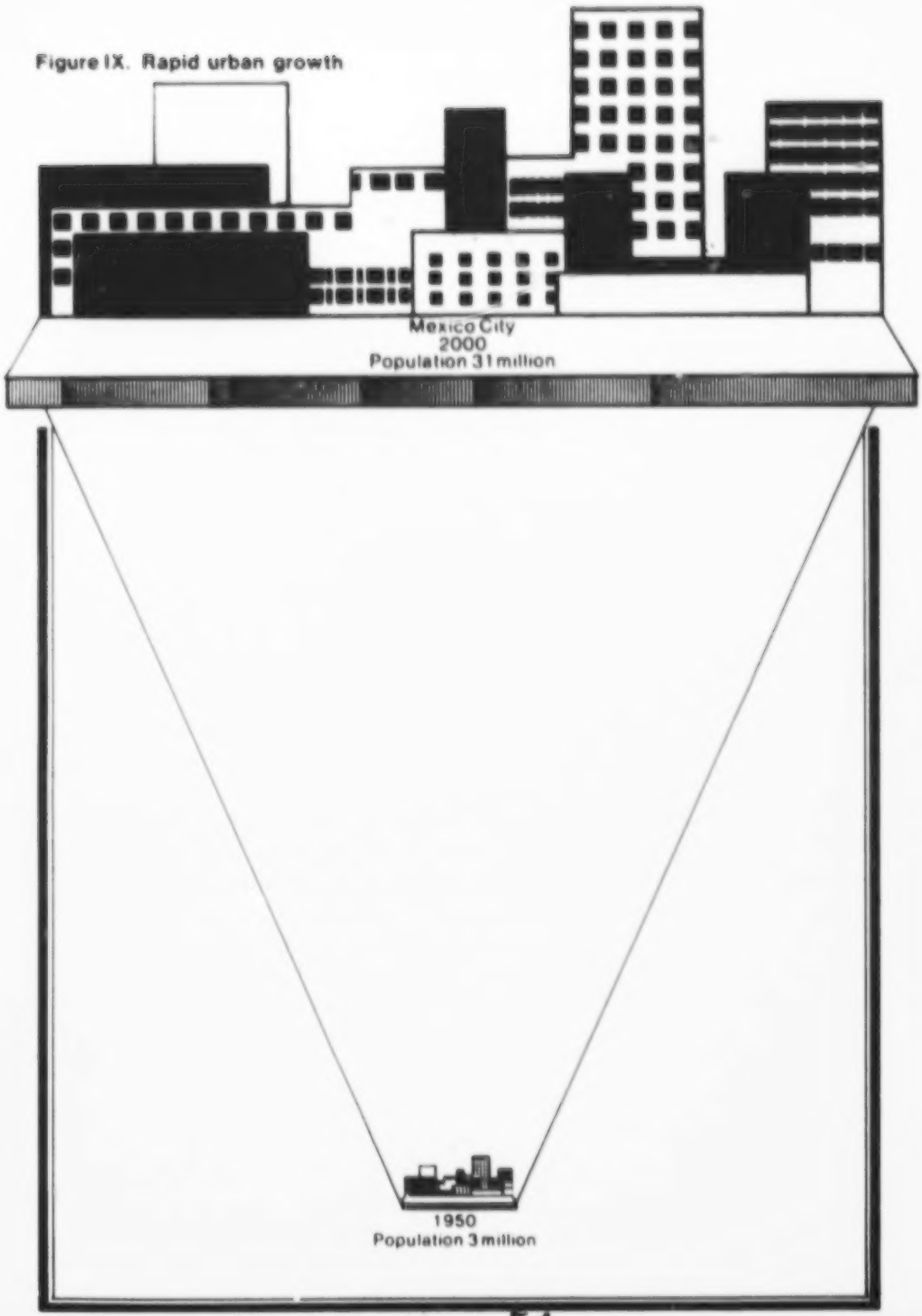
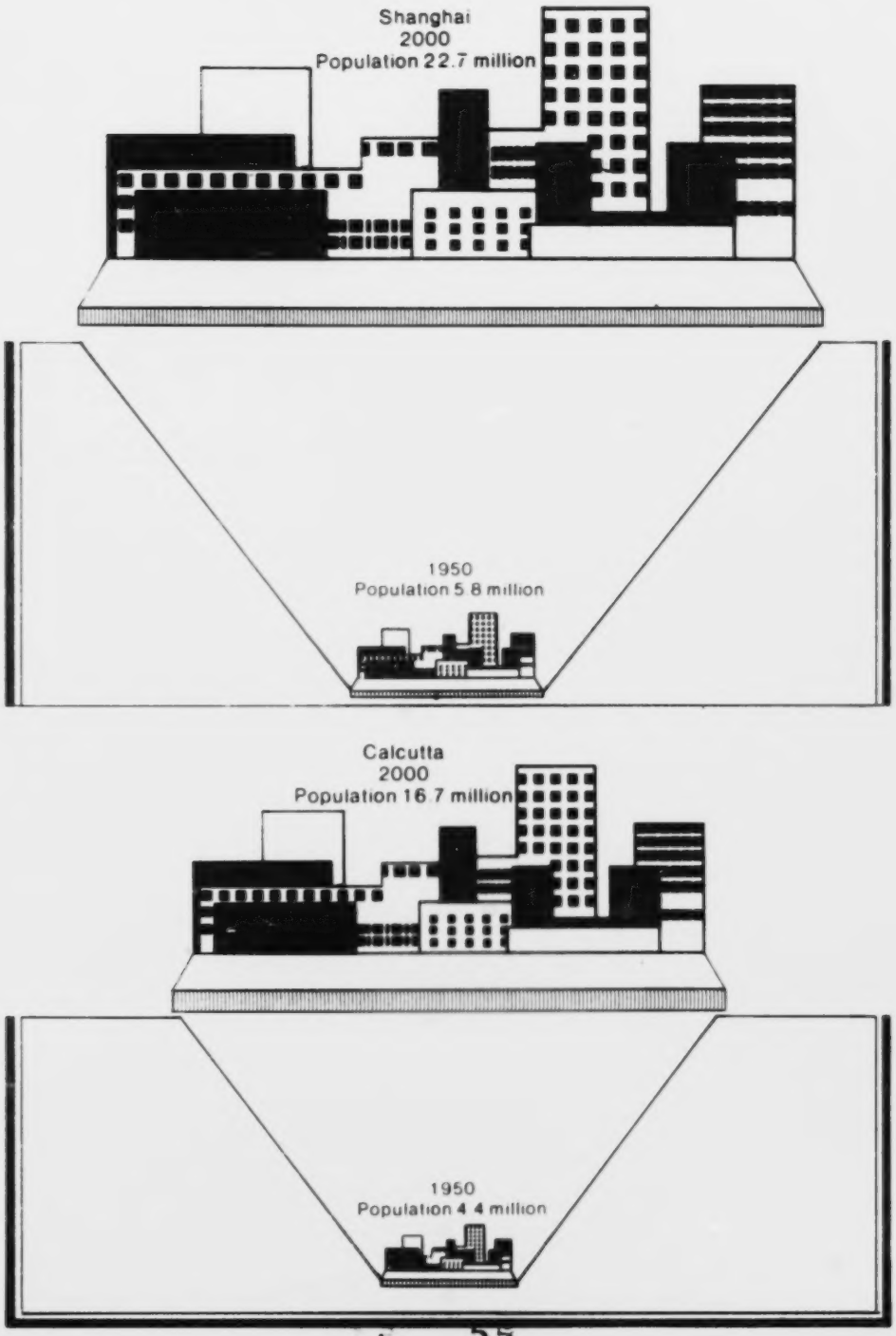
28 UNEP/GC.12/11/Add.2.

29 Under project FP/1600-77-02.

Figure IX. Rapid urban growth




Shanghai
2000
Population 22.7 million
1950
Population 5.8 million
Calcutta
2000
Population 16.7 million
1950
Population 4.4 million

66. The runaway growth of urban centres places the severest of strains on the resource base: lack of adequate water and sanitary facilities leads to sickness and disease among the population; the provision of proper housing becomes difficult and expensive; the accumulation of wastes, often improperly or inadequately disposed of or recycled, causes disease. The ability of the environment to accommodate such quantities of wastes as accrue daily in cities the size of Calcutta or Mexico City is becoming increasingly limited.

67. While the body within the UN system entrusted with the central responsibility for human settlements is clearly UNCHS (Habitat), UNEP naturally shares the concern about the environmental aspects of human settlements, and accordingly co-operates closely with its sister organization in this field.[30]

68. During the period under review, a fruit of this co-operation was the completion in draft form of two of three projected volumes of guidelines for environmental planning and management of human settlements. The two drafts were subsequently reviewed by a panel of experts and, duly amended, will be submitted to selected Governments for their comments and tested for their applicability in field projects.

69. Under a joint Habitat/UNEP/Government of Mexico project on assessment of the environmental impact of urban development,[31] a draft methodology for environmental impact assessment has been produced. Following review by a panel of experts, a revised text is scheduled for publication in 1984. UNEP and UNCHS (Habitat) also jointly organized a workshop for urban planners and decision-makers on the subject of planning of human settlements to improve environmental conditions. The three-week workshop took place in the USSR in August 1983, with 23 participants from 15 French-speaking African countries.

70. In addition to the numerous activities undertaken in collaboration with UNCHS (Habitat) during the year under review, UNEP is continuing work to develop, in association with UNESCO, an approach by means of which ecological theories can be applied to human settlements planning and management. This endeavour led to an urban ecology project for Hong Kong and Papua New Guinea.[32] UNEP and the UNESCO Man and the Biosphere programme have jointly undertaken studies which have led to the development of ecological planning guidelines for human settlements in specific biogeographical areas: arid/subtropical regions—Alexandria (Egypt) and Khartoum (Sudan); estuarine ecosystems—Ivory Coast, Senegal and Zaire; and humid and subhumid coastal systems—Thailand.

71. In October 1983, in co-operation with the Ministry of Research and Technology of the Federal Republic of Germany, UNEP held an international symposium on solid

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30 The Bureau of the UNEP Governing Council at its eleventh session and the Bureau of the United Nations Commission on Human Settlements at its sixth session met the Executive Directors of UNEP and UNCHS (Habitat) on 13 and 14 December 1983 to review co-operation between the two organizations. The Executive Director's report to the Council on that meeting is contained in document UNEP/GC.12/10.

31 FP/0104-81-01.

32 FP/0104-76-05.

waste management for developing countries, which was attended by 58 participants from 27 countries. A comprehensive set of technical documents was prepared on all aspects of solid waste management. UNEP and the Ministry intend to publish a selection of these technical documents together with a report that will provide a synoptic review of the solid waste management situation in the 27 countries represented at the symposium.

72. In collaboration with the National Water Leak Survey Engineering Association of Japan, UNEP organized in December 1983 in Japan a training course for water technicians from five major cities in Asia and the Pacific. The technicians were trained in the use of sonar equipment to detect leaks in water pipelines, and in the application of up-to-date preventive measures.

(b) Human and environmental health (budget subline 0107) and improvement of working conditions and of the working environment

73. There were no marked changes in the general health conditions of the world population in 1983; malnutrition, communicable diseases and environmental pollution continued to plague human health, their seriousness and severity varying according to the regions and countries concerned. Malnutrition and communicable diseases remained the principal contributors to the high mortality in developing countries; the increasing and uncontrolled use of chemicals in the agricultural sector in those countries also posed a serious threat to human health and life. Even in developed countries, chemical pollution of the environment continued to aggravate many diseases—pulmonary, neoplastic, cardio-vascular, etc. The contamination of soils assumed very serious proportions in many areas of the world. These problems demand a solution to protect the health not only of the present world population but also of future generations.

74. In 1983 UNEP largely concentrated its contribution towards the preservation and protection of human and environmental health on activities aimed at the protection of water, air, soil and food from risk factors affecting human health. This contribution primarily took the form of publications and training activities which, in the eleventh year of the organization's existence, are well established as the mainstay of this programme. Publications on such topics as environmental factors affecting human health, the management of hazardous wastes and carcinogen analysis, as well as support for training in the control of risk factors, should have helped to fill many gaps in health protection. However, owing to a lack of resources, insufficient attention was paid to sanitation, disease vector control and the adverse effects on health of uncontrolled urbanization and industrialization in developing countries. UNEP intends to strengthen its efforts to promote closer co-operation between health and technological authorities in preventive measures.

75. During the year under review, UNEP continued its co-operation with ILO, WHO and the International Agency for Research on Cancer (IARC) in the preparation and publication of health criteria documents.[33] One such document and ten executive summaries were published in 1983, providing information on a wide spectrum of environmental chemical and physical factors affecting human health. To date, 25 documents in

33 Projects FP/0107-79-04 and FP/0107-81-02.

this series and 16 executive summaries have been published, supplying drafters of policy, decision-makers, health personnel and other specialists with basic information on important environmental factors.

76. Also in co-operation with IARC and WHO, a publication on methods of analysis of N-nitroso compounds was issued in 1983 which, together with five manuals issued earlier under this series (Environmental carcinogens—Selected methods of analysis), establishes a solid information base for control of environmental carcinogens.[34] Another publication issued in co-operation with WHO in 1983 was a handbook on *Management of Hazardous Waste*,[35] which is intended to assist those responsible for policy-making and decision-making in Governments, control authorities and industry to develop and organize hazardous waste management schemes appropriate to their specific needs. (See also paragraph 37 above.)

77. Although such publications provide valuable information and guidance for decision-makers, the long period needed for their preparation, revision, clearance, translation and reproduction is a definite drawback. Intensified efforts by all concerned are necessary to get up-to-date information out in published form as quickly as possible.

78. The third meeting of the WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control was held in Rome in 1983.[36] Through the Panel the three agencies are engaged in a co-ordinated effort to ensure that health and environment are taken fully into account in the development of natural resources, and particularly in water resources projects. At the Rome meeting, the policy for 1982/83 was revised in the light of latest developments, project proposals were discussed and the Panel's plan of work for 1983/84 was formulated. The Panel's secretariat was strengthened from 1 September 1983 by the arrival of an expert provided by the Netherlands, and it is to be hoped that the implementation of activities will now be speeded up.

79. The third in a series of African meetings on lay reporting on environmental health information was held in Addis Ababa in 1983.[37] The meeting studied the current procedures for lay reporting in the context of health and social systems in African countries, and considered ways of introducing more effective mechanisms. Although lay reporting is a very important element for African as well as other developing countries, it has not as yet been sufficiently tied in with other health care activities to create a broader and more closely linked system.

80. During 1983, UNEP continued its co-operation with other UN bodies in various international training activities. Selected personnel from African countries participated in a training workshop on mutagenicity and carcinogenicity testing organized jointly by

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34 Project FP/0107-79-02.

35 Project FP/0107-80-04.

36 Under project FP/1107-82-01.

37 Under project FP/0107-81-03.

UNEP and WHO in Nairobi.[38] The aim of the workshop was to enable African countries to begin organizing their own systems of carcinogen control. Although such training courses provide concrete and valuable assistance, particularly to developing countries, there is a need to link them more closely to actual application, so as to ensure the proper use of trained manpower.

81. While UNEP, together with other UN bodies, continued its activities in the area of human and environmental health during 1983, the working environment received less attention. However, a plan of activities was prepared on improvement of the working environment and occupational health for implementation during 1984-1985.

(c) Pest management systems (budget subline 0108)

82. Over the past few years, demand for food has increased considerably in the developing countries, and it is estimated that by the year 2000 food requirements will be double those of 1980. Meanwhile, malaria and other tropical diseases are on the increase, and serious measures are called for on a global scale if they are to be brought under control. The increased demand for food, coupled with the spread of malaria and other tropical diseases, has given rise to growing demand for pesticides. In 1980, a quantum increase in the use of pesticides was registered, and, according to FAO, pesticide use has been growing at the rate of 4.5 per cent a year.

83. Several non-governmental organizations concerned at the upsurge in pesticide use grouped together in 1982 to establish the Pesticide Action Network, whose aims include combating global pesticide proliferation. An International Research Programme on the Perception and Management of Pests and Pesticides, which has received support from UNEP, continues to assemble data and information on national profiles of pesticide production, pest management practices and the international flow of pesticides. This Programme is also conducting case-studies on alternative pest management systems. Within the UN system, expert groups have continued to provide guidance to, and coordination in, the work of integrated pest and vector control.

84. During the year under review, joint UNEP/FAO pilot activities for the implementation of integrated pest control have been continued.[39] A number of Governments have established, or are in the process of establishing, their own national programmes for integrated pest control. As for the control of disease vectors, WHO has developed a variety of techniques geared towards overcoming emerging vector control problems, such as the development of resistance or the emergence of refractory vector behaviour. In parallel, training at various levels has been carried out in integrated techniques for the control of agricultural pests and disease vectors, and guidelines have been developed and published on integrated management of agricultural pests affecting selected crops.

85. At an editorial meeting held in Geneva in May 1983, the FAO/UNEP/WHO draft guidelines for surveillance, prevention and control of cysticercosis/taeniasis were final-

38 Under project FP/0107-82-01.

39 Under project FP/0108-76-05.

ized.[40] At the same meeting, the contents of two other sets of draft guidelines were discussed, one on slaughter and meat hygiene in rural conditions and the other on food hygiene at home. During 1983, the drafting of various other guidelines was pursued, and work is proceeding on the translation of the *FAO/UNEP/WHO Guidelines for Surveillance, Prevention and Control of Echinococcosis/Hydatidosis* into Arabic, French and Spanish.

86. Three review missions on the joint FAO/UNEP Co-operative Global Programme for the Development and Implementation of Integrated Pest Control in Agriculture were organized during September/October 1983—one to north-east Africa, a second to the Near East and a third to Latin America.[41] An *ad hoc* session of the FAO/UNEP Panel of Experts on Integrated Pest Control was held in Rome in November 1983 to discuss the reports of the missions and offer guidance for future joint FAO/UNEP activities in the integrated management of agricultural pests. The Panel agreed that the catalytic role of UNEP had contributed to the fact that the number of pesticide applications in cotton-growing regions of the Near East and in north-east Africa had decreased from nine to four. The decrease had been encouraged by the intercountry programmes on integrated pest control in those regions. The Panel concluded that action by UNEP had had the desired effect, and that greater attention should now be paid to other east African countries where integrated pest control is still in its initial stages.

87. The preparation by FAO of an international code of conduct for the distribution and use of pesticides has been a subject of discussion at several meetings, and UNEP has participated in this exercise. An inter-agency consultation held in Rome in August/September recommended that the work should continue; a revised draft is currently under preparation.

88. At the second ECA/FAO/UNEP inter-agency consultation on the prevention of post-harvest food losses, held in Rome in September 1983, it was agreed that there should be a closer co-ordination of activities on food loss prevention, with agencies combining their resources whenever possible to implement agreed projects. To facilitate such co-operation, FAO was requested to take the lead in the preparation of a guideline paper on post-harvest losses and their significance in rural development. It was also agreed that increased attention should be given to the dangers of residual toxicity stemming from chemical protection, particularly in roots and tubers; this threat is to be avoided through the promotion of alternative, appropriate technologies applicable at the farmer level.

89. The second FAO/IAEA Research Co-ordination Meeting on isotopic tracer-aided studies of bound pesticide residues in soil, plants and food was held in Munich in July 1983, with the co-operation of the Government of the Federal Republic of Germany, to review the progress achieved since the first meeting in Costa Rica in 1981. Scientists were able to confirm the existence and the rate of formation of bound residues (i.e. those chemically or physically attached to the molecular structure) in various plants,

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40 Under project FP/0108-79-02.

41 Under project FP/0108-76-05.

soils and foods. A representative of UNEP participated in the meeting, as the research programme is of great relevance to UNEP work in this field.

2. TERRESTRIAL ECOSYSTEMS
(Budget lines 11 and 17)

90. This section is divided into the following seven programmes: arid and semi-arid ecosystems including desertification; tropical woodlands and forest ecosystems; mountain, island, coastal and other ecosystems; soils; water; genetic resources; and wildlife and protected areas.

(a) Arid and semi-arid lands including desertification (budget line 1700)

(i) *Implementation of the Plan of Action to Combat Desertification*

91. In most regions of the developing world, factors contributing to desertification such as below-average rainfall, severe drought and increased pressure on the land continued virtually unabated during 1983. Drought occurred in many of the continents, but Africa in particular has had the most catastrophic drought, affecting some 34 countries and causing major dislocation of population and famine. In the Sudano-Sahelian region, the 1969-1973 drought is generally considered to be continuing and significantly contributing to the severity of desertification that has continued to increase in the region.

92. If only one achievement were to be named in this field it would undoubtedly be the increased awareness of desertification problems. This awareness has been growing ever since preparations were initiated for convening the United Nations Conference on Desertification in 1977. It is lamentable that this increased awareness of the problem has not been matched by actions to fight desertification, and by the technical and financial preparedness needed for the fight; they continue to lag far behind while the situation worsens year by year.

93. This gloomy picture has, however, been slightly brightened by reports indicating that a measure of success has been achieved in containing dune encroachment, that concerted efforts are under way on the control of waterlogging and salinization in irrigated lands, that some advances have been made in assessing and monitoring the problems of desertification and that an increasing number of research and training facilities are being established.

94. The Consultative Group for Desertification Control held its fourth session in Nairobi in February 1983 to consider the mobilization of finance for 18 high-priority anti-desertification project proposals and to discuss ways and means of improving the functioning of the Group. Only five projects received expressions of support in the meeting. Of these, three have been fully financed with the active participation of AGFUND and are now being implemented. Another one has received a contribution of $US 88,362 from Australia, and the additional external financing required is being negotiated with other potential donors.

95. The Inter-Agency Working Group on Desertification held its eighth and ninth meetings in Geneva in April and September 1983 respectively. At its eighth meeting the

Group discussed the involvement of the UN agencies concerned in the implementation of the system-wide medium-term environment programme during its first biennium (1984-1985), and particularly the concrete projects and activities related to desertification. At its ninth meeting, the Group reviewed progress in the implementation of the decisions and recommendations of its previous meeting, with particular emphasis on arrangements for the general assessment of progress in the implementation of the Plan of Action, which, in accordance with the Plan of Action itself, is to be undertaken by the Governing Council at its twelfth session.[42] The Group also considered reports by member agencies on their recent activities related to desertification matters.

96. In response to paragraph 10 of General Assembly resolution 35/73, UNEP, in co-operation with other UN bodies, has been working towards the creation of specific programmes of research and training at the national, regional and international levels. The first activity, carried out in 1983 as part of a programme prepared by the Inter-Agency Working Group at its sixth meeting, was a survey of research and training institutions in the ECWA region with a view to the preparation of a directory.

97. Early in 1983, UNEP and ECWA held a joint programming meeting to explore areas of future co-operation in environmental matters. Among the areas chosen was desertification, and the specific fields agreed upon for co-operative activities included preparation of national plans of action and specific pilot anti-desertification projects, support to training courses and seminars, and the establishment of regional research and training networks and programmes.

98. In response to Governing Council decision 10/18, in which the Executive Director was requested to facilitate a process of exchange of information and expertise on desertification matters in Africa, draft reports on available information and experience on desertification control in the region, and directories of national, regional and international institutions involved in research and training on subjects relevant to desertification, have been prepared for the Kalahari, north African and Sudano-Sahelian regions.[43] A meeting held in September 1983 with representatives from CILSS and UNSO discussed these reports and approved their publication, which is scheduled for 1984.

99. One of the main tasks of UNEP in this field in 1983 has been preparing for the Governing Council's general assessment of progress in the implementation of the Plan of Action. As part of the preparations for the assessment, UNEP sent a desertification questionnaire to 91 countries affected by desertification and 10 other countries involved in providing assistance to affected countries. UNEP and UNSO provided assistance to over 70 developing countries in collecting data required for the questionnaire. A total of 66 responses were received, though the quality and quantity of the data supplied vary widely from country to country. In addition, three technical reports, eight regional assessments, a review of demographic changes between 1973 and 1983 as they affect the status of desertification, a report on anti-desertification activities conducted by NGOs, an updated compendium of UN system activities in the field of desertification, an experi-

42 The Executive Director's report to the Council on the assessment of the status of desertification and the implementation of the Plan of Action is contained in document UNEP/GC.12/9.

43 Under project FP/1700-82-08.

mental digitized map assessing desertification in Africa and three major supporting documents were prepared under the supervision of UNEP. Three updated case-studies were prepared with the assistance of UNESCO, and two of the nine associated case-studies prepared for the 1977 Conference were updated as part of the assessment process. In addition, 26 country reports have been received and analysed [44]

100. UNEP intends to use the occasion of the general assessment to launch a comprehensive public information campaign,[45] with the overall aim of contributing towards more effective implementation of the Plan of Action and desertification control in general by mobilizing concern in affected and donor countries alike. The principal elements of the campaign will be multi-projector and single-projector slide shows for conferences, NGO meetings, exhibits, etc.; a film series for television; radio programmes for regional and international broadcasting; and a briefing document, press folder and photo sheet for journalists.

(ii) *Implementation of the Plan of Action in the Sudano-Sahelian region*

101. The volume of funds mobilized and allocated by UNSO in 1983 through the United Nations Trust Fund for Sudano-Sahelian Activities amounted to $US 12.9 million, bringing the total resources mobilized by UNSO to $59.5 million since the start of its desertification control mandate in 1979. Programme support from the UNEP contribution to the joint venture was utilized exclusively for project formulation. Despite the resources mobilized, lack of sufficient financing remained one of the principal constraints on the effective implementation of the Plan of Action in the Sudano-Sahelian region.

102. During the year under review, the main thrust of UNSO anti-desertification operations was in the areas of deforestation control, range management, water resources management, soil protection and sand dune fixation, and planning and co-ordination. UNSO continued to emphasize the involvement of the people affected in the planning and implementation of projects. It also continued to work with the Governments and populations of the region in consciousness raising on the importance of desertification, the preparation of national plans or strategies for desertification control and the establishment or strengthening of institutional machinery.

103. Expanded activities carried out by UNSO in the area of forestry included the establishment of fuelwood plantations to meet the energy requirements of rural and urban populations in an ecologically sound way. In Ethiopia, the Danish International Development Agency agreed to contribute $US 5.9 million through the Trust Fund for the establishment of 8,700 hectares of fuelwood plantations near the towns of Debre Birhan and Nazret, and the Finnish International Development Agency is contributing $US 500,000 through the Trust Fund for the provision of infrastructure and the establish-

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44 Although the Executive Director's report on the assessment of the status of desertification and the implementation of the Plan of Action (UNEP/GC.12/9) is the only document being officially submitted to the Governing Council on this subject, the other documents referred to will be available and may be consulted by participants.

45 Project FP/1700-83-01.

ment of 200 hectares of plantations. With FAO as executing agency, UNSO also supported short courses in nursery and afforestation techniques and species trials for rain-fed fuelwood plantations in Somalia.

104. In Senegal, a programme was formulated for rehabilitation of the saline soils of the Sine-Saloum region through reforestation. The Canadian International Development Agency, which made a $US 150,000 contribution to the Trust Fund to finance the first phase of the project, involving cartographic and pedological studies of the region, is now engaged in negotiations for financing of the entire project at a cost of over $US 1.5 million.

105. New projects were also formulated for the establishment of shelter belts in northern Sudan and assistance to the Shelter Belt Research Station at Kano in northern Nigeria.

106. A particular approach UNSO has been pursuing is agroforestry. Among projects UNSO has helped design are schemes ensuring complementary and mutually supportive forestry and agricultural activities in Kano in northern Nigeria, and in the Kerio forest in Kenya. Agroforestry activities include the planting of *Acacia albida* which, with its deep tap-roots, is drought-resistant, does not compete with food crops, improves the fertility of the soil through its nitrogen-fixing qualities, and provides fodder and shade for livestock. In Benin, UNSO allocated $US 1,131,900 for a multi-purpose tree-planting programme financed by earmarked contributions through the Trust Fund of $US 306,900 from AGFUND and $US 825,000 from the Netherlands Government. UNEP made a $US 10,000 contribution to the project, and the Government of Benin is meeting the remaining costs.

107. UNSO continued to support projects for the development of alternative sources of energy. In Senegal, feasibility studies were completed for the systematic harvesting of peat for use in briquettes as fuel and in mixtures in sandy soils to improve their structure, organic content and productivity. The studies indicated considerable potential for the use of peat as a source of energy (which could reduce demand for charcoal in Dakar by 50 per cent), for soil protection and to increase agricultural productivity. UNSO also initiated feasibility studies for the possible production of fuel briquettes in the Niger and the Sudan. In Nigeria, UNSO has been exploring with the Government the possibility of producing charcoal from by-products of wood-based industries in the south for utilization in the north, which has limited ligneous resources. In the Gambia and Senegal, an UNSO technical mission examined the condition of the mangroves in Casamance and Sine-Saloum and along the Gambia river. Proposals were made for projects aimed at the protection, salvaging and ecologically sound harvesting of mangrove trees, some of which have fallen victim to die-back, the causes of which are being studied.

108. As another means of reducing demand for fuelwood, UNSO continued to support the design, development and production of fuel-efficient cooking stoves that use less wood or different kinds of fuel. In Mali, Mauritania and the Niger, UNSO and the Voluntary Fund for the United Nations Decade for Women financed preparatory assistance activities for the design and development of fuel-efficient wood-burning stoves. UNSO is seeking resources, in co-operation with the CILSS secretariat, to finance large-scale

follow-up projects in these countries. UNSO also agreed to finance a regional preparatory project for the design of improved wood-burning stoves in Kenya, Nigeria, Somalia and the Sudan.

109. UNSO also dispatched missions to Benin and Guinea to assist the two Governments in the preparation of large-scale projects for controlling bush fires.

110. In Kenya, an UNSO mission prepared a rangeland management and development plan for the arid and semi-arid zones of the country. The plan and related projects will be used by UNSO for resource mobilization purposes. In Djibouti, UNSO allocated $US 543,800, with contributions from AGFUND, UNEP and UNSO general resources, for a pilot project for desertification control and ecologically sound development of the natural resources in the coastal plains of the country. In Somalia, UNSO financed a prefeasibility study for the establishment of a Nomadic Studies Institute, while in Senegal it supported a regional workshop on ecological monitoring of the Sahelian rangelands of Senegal in November 1983. The purpose of the workshop was to familiarize the participants with the methodology developed and other results achieved by the UNEP/FAO project on the inventory and monitoring of Sahelian pastoral ecosystems. (See also paragraph 8 above.)

111. In the Gambia, UNSO obtained a contribution of $US 472,000 to the Trust Fund from the Government of Australia for a project for the construction of small dams for irrigation and protection against salt water intrusion. The project will help to ensure a sufficient supply of fresh water for longer periods, including periods of drought. UNSO has also agreed to finance a project for the management of ground-water resources in the Banjul area. The project will be implemented by the Government with the United Nations as co-operating agency. Arrangements have been made for the construction of a mathematical model and the training of Gambian nationals in ground-water modelling by the computer company IBM.

112. In Mali, UNSO has agreed to allocate $US 500,000, for which a contribution by the Government of Yugoslavia is expected, to finance a project to strengthen the operational capacity of the Department of Water Resources in ground-water exploration and exploitation.

113. In Cape Verde, UNSO allocated a $US 200,000 contribution by AGFUND to the Trust Fund for the continuation of a pilot project for the protection of the Sao Joao Bautista valley against soil erosion. The project will involve afforestation to provide vegetative protection for the soil, and the building of dikes for water erosion control and water harvesting purposes. In Sudan, a feasibility study was carried out on a pilot research programme for the utilization of *gardud* soils, the surface of which has hardened as a result of the combined effect of rainfall impact and wind erosion. In Somalia, UNSO allocated $US 1.3 million through a Trust Fund contribution from the Danish International Development Agency for coastal sand dune stabilization over 1,500 hectares in the Brava area, through dune fixation and water erosion control. In the Niger, the Government of Norway has agreed to contribute $US 560,000 as an initial contribution to the Trust Fund for a project aimed at controlling the encroachment of sand dunes upon the palm groves of Bilma district.

114. Following a meeting of donors for the reconstruction of Chad held in November 1982, a joint CILSS/Club du Sahel/UNSO mission visited Chad in January 1983 to assess the needs of the country and prepare the ground for the re-establishment of technical co-operation with the Government. This was followed by an UNSO multidisciplinary desertification planning and programming mission in April, which prepared a report on desertification and identified 20 desertification control projects jointly with the technical services concerned. It is envisaged that these projects will form the core of a future national plan for combating desertification, and will be used for future UNSO resource mobilization efforts for the country.

115. In Senegal, UNSO has initiated assistance to the Government in the preparation of a national strategy for combating desertification, with the World Bank as executing agency. A committee of representatives from various ministries, under the aegis of the Ministry of Planning, has been established and will convene a national seminar in 1984 to formulate the strategy. In the Niger and the Upper Volta, UNSO provided assistance to the Governments for the formulation of national desertification control strategies, with UNESCO as executing agency. The national strategy for the Niger will include an updating of the case-study on desertification prepared by the Government for the Desertification Conference in 1977. In Guinea-Bissau, the preparation of a national plan for combating environmental degradation, and especially soil degradation, was funded by UNSO with UNESCO as executing agency. In Benin, UNSO funded a project, also with UNESCO as executing agency, to assist the Ministry of Planning in the development of an institutional structure and work programme for combating desertification.

116. UNSO submitted 10 projects to the fourth session of the Consultative Group for Desertification Control. Through various planning and programming missions and continuous consultations with the authorities concerned, UNSO has identified with the governments of the region a total of 309 priority projects requiring investment of $US 743.5 million, of which a total of $US 412.6 million has been committed by bilateral, multilateral and other sources. This leaves over $US 330.8 million of external resources still needed to finance priority anti-desertification projects for which the Governments of the region have requested assistance. Thus, there is still a need for considerable volumes of assistance to combat desertification that can be mobilized only by a concerted effort on the part of the international donor community.

117. UNSO continues to maintain close working relationship with regional and other bodies, both within and outside the United Nations system. It participated in donors' round tables convened by UNDP in Djibouti and Mali for the purpose of co-ordinating and increasing donors' interest in mobilizing resources. UNSO has also continued to co-operate with the Governments of the member countries of CILSS in organizing, with the support of the Club du Sahel and CILSS itself, special round tables on forestry aimed at assessing the latest situation in the forestry sectors and proposing national strategies for forest conservation in the CILSS countries. In accordance with a co-operation agreement signed in 1982 with the West African Economic Community (CEAO), UNSO and the Community are financing a study, carried out by FAO, which will produce recommendations on technical aspects of grain and cereal storage at the village and farm levels in the member States of CILSS.

118. In April 1983, a seminar was held in Senegal under the joint sponsorship of UNSO and the International Trade Centre on the latest developments concerning gum arabic research, production and marketing. UNSO also participated, in October, in a workshop on soil physics sponsored by the International Centre for Theoretical Physics in Trieste (Italy) and, in November, in a seminar convened by UNESCO in Medenine, Tunisia, on soil erosion in pre-desert zones. Together with UNEP and ECA, UNSO sponsored and participated in the preparations for and holding of a Multidisciplinary Meeting on the Impact of Drought on Socio-economic Systems in Africa, which was held in Nairobi in December.

119. As part of a programme to promote the exchange of information on and expertise in desertification matters, UNSO prepared a survey and a directory covering the Sudano-Sahelian region (see paragraph 98 above).

120. Finally, UNSO commissioned and helped in the preparation of an assessment of desertification in the Sudano-Sahelian and adjacent regions seven years after the adoption of the Plan of Action. This assessment, together with a global assessment prepared by senior advisers to the Executive Director, was reviewed at a meeting held in December in Geneva.[46]

121. In its resolution 38/164 of 19 December 1983 on the implementation in the Sudano-Sahelian region of the Plan of Action to Combat Desertification, the General Assembly invited the Governing Council of UNEP to examine at its twelfth session the possibility of including Ghana and Togo in the list of countries which receive assistance, through UNSO, in implementing the Plan of Action, and to report on the matter to the Assembly at its thirty-ninth session.

122. In considering the possibility of including Ghana and Togo within the geographical scope of the desertification control mandate of UNSO, the Council may wish to take the following considerations into account: Ghana and Togo are located directly to the east of Benin (which the Council decided to include in the desertification control mandate of UNSO by decision 9/22 B), and directly south of the Upper Volta. Although their climates are not as arid as those of the true Sahelian bioclimatic zones, they contain extensive subhumid areas similar to those of Benin. The northern parts of Ghana and Togo, like northern Benin, are especially vulnerable to the harmattan, a hot, desiccating, dust-laden wind that blows from the north-east across the Sahara. Partly because of these climatic factors, there is extensive savannah in Ghana, especially north of the Kwahu plateau, and in northern Togo. Togo's coastal areas in the south, as well as Ghana's south-eastern coast, are also dry, and both countries were hit by drought in 1982 and 1983. Consequently, there are extensive areas in both Ghana and Togo which are suffering from desertification.

123. Finally, it should be noted that conditions in the Atakora massif, which forms a watershed between the Niger and Volta basins, affect the flow of the Niger river in the Sudano-Sahelian countries of the Niger, Nigeria and the Upper Volta. The massif is a

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46 The regional assessment for the Sudano-Sahelian region will be available, on request, to delegates to the Governing Council.

continuous mountain chain extending from northern Ghana through northern Togo to northern Benin. The geographical and ecological interrelationship between northern Benin and its northern Sahelian neighbours was one of the reasons for the inclusion of Benin in the desertification control mandate of UNSO. For these reasons, it is recommended that the Governing Council shall consider favourably the inclusion of Ghana and Togo among the countries which receive assistance through UNSO in implementing the Plan of Action.

(b) Tropical woodlands and forest ecosystems (budget subline 1102)

124. During 1983 the general public became more aware of the consequences of unabated deforestation and forest depletion, and Governments responded by implementing programmes to reduce demands on their forest resources to a sustainable level. UNEP has assisted in this process by developing and disseminating the basic information necessary to implement environmentally sound tropical forest management programmes, by training the indigenous scientists and technicians necessary to support and continue the programmes, and by increasing public awareness of the problems, their consequences and alternatives available to solve them.

125. There are two ongoing projects in the tropical forest ecosystem programme. The objective of the first [47] is to organize a series of training workshops to enable managers and planners to draw up national management programmes for the conservation of tropical forest ecosystems. In October 1983, a training workshop on the management of indigenous hardwoods in west and central Africa was held in Abidjan, at which participants from eight African countries decided that a research programme to improve the quality and growth rates of west African indigenous timber trees should be initiated. This programme, which it is hoped could be carried out as a west African regional project, might be submitted to the European Economic Community for financing.

126. Under the same project, funding was provided for additional meetings in support of training and dissemination of information. At a meeting on reforestation strategies, held in Wageningen in the Netherlands in September 1983, the participants recommended that a world-wide programme should be undertaken to address the basic causes of deforestation and forest degradation. They also recommended that the rate of tree planting at the global level should be increased fivefold.

127. In accordance with Council decision 10/14, meetings were held in Kuala Lumpur (in September) and Bangkok (in December) to formulate a regional tropical forestry programme for Asia and the Pacific. At these meetings, national and international reports were presented and attempts were made to identify gaps in current activities related to tropical forest problems, such as shifting cultivation, rational watershed management, promotion of agroforestry, alternatives to fuelwood harvesting, etc.

128. The objective of the second ongoing project, a joint UNEP/UNESCO effort,[48] is

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47 FP/1102-79-01.

48 FP/1102-76-01.

to assist the countries of the tropics in building up a number of interlinked and co-ordinated pilot projects which would cover and study major problems arising in the rational management of tropical forest ecosystems. To date pilot projects have been established in 14 countries.

(c) Mountain, island, coastal and other ecosystems (budget subline 1105)

129. The year 1983 saw growing awareness of the fragility of some of the less resilient ecosystems, particularly those associated with coasts and islands.

130. Under this subline UNEP has five current projects, four of which are specific as to region (two in Latin America and the Caribbean, one in Africa, and one in Europe and the Mediterranean) and concern unique ecosystems within the region. The fifth project, being implemented by IUCN, is global in scope but deals primarily with coastal and freshwater ecosystems.

131. Under one of the projects,[49] the purpose of which is to develop a co-operative programme of ecologically oriented research, training and information in the Andes, the drafts of three volumes of a four-volume series on the current state of knowledge concerning the area were submitted to UNEP for review and eventual publication. Also during 1983 IUCN, as co-sponsor of another project, on conservation strategies for critical ecosystems,[50] prepared and submitted to UNEP for comments two draft position papers, the first concerning tidal mud-flats and the second salt-water marshes. A third position paper, on estuaries, sea-grass beds and rocky shores, should be available in the near future. A final report on the global status of mangrove ecosystems [51] was published by IUCN in 1983.

132. The FAO Committee on Forest Development in the Tropics met in Rome in October 1983 and, in response to a request made by the Governing Council in decision 10/14, agreed to broaden its mandate to assume the role of continuing review of international activity related to tropical forestry.[52]

133. UNEP also participated in two drafting meetings for a United Nations Convention on Tropical Timber, held under UNCTAD auspices in Geneva in March and November 1983, which produced a new draft convention taking into account not only trade aspects but also environmental concerns, with the objective of sustainable utilization and conservation of tropical forests and their genetic resources.

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49 FP/1105-75-02.

50 FP/1105-80-01.

51 *Global Status of Mangrove Ecosystems*, Commission on Ecology Papers No. 3 (Gland, Switzerland, IUCN, 1983).

52 The conclusions of the meeting, in which UNEP, UNESCO and the World Bank participated, are reported in document UNEP/GC.12/12.

(d) Soils (budget subline 1106)

134. Soil is the basis for food production, and it conditions the productivity of all ecosystems. Soil is a renewable resource provided that use is compatible with long-term protection. When soil is used beyond its capacity, however, it becomes finite and irreplaceable. Land, which is the base of most valuable resources, becomes the limiting resource and must be managed and conserved as far as possible.

135. Increasing demand for food in Africa has resulted in a considerable expansion of crop cultivation on marginally arable land. In Latin America, farming has encroached upon forests, pasture land and bush. The average annual global loss of agricultural land to non-agricultural use is approximately 8 million hectares; erosion has destroyed an additional 3 million hectares and desertification 2 million, while 2 million have been lost due to toxification.[53] The international community has become increasingly aware of the fact that the capacity of land and soil resources to sustain further increases in agricultural production is rapidly diminishing.

136. During 1983, UNEP revised and refined a draft plan of action to implement the World Soils Policy.[54] The Policy seeks to apply scientific knowledge and management to the soils of the world in order to draw the attention of mankind and political leaders to the extent and importance of soil degradation and loss, both national and world-wide; monitor changes in soil quality and patterns of land use; slow down the loss of productive land to non-agricultural uses; enlarge the area and improve the quality of the world's agricultural land; and increase production on a sustainable basis.

137. Under an internal project [55] a number of activities were accommodated. Draft guidelines for the control of soil degradation were prepared and, in view of the positive feedback from users, are currently being translated into French and Spanish, in co-operation with FAO. Publication of the final version is planned in late 1984. Another set of guidelines, on farming system principles for improving food production and control of soil degradation in the arid, semi-arid and humid tropics, was prepared in 1983 following a UNEP expert group meeting in June 1983 in Hyderabad,India, which was attended by representatives of the International Crops Research Institute for the Semi-arid Tropics, the International Institute of Tropical Agriculture and the International Rice Research Institute.

138. The third in a series of meetings dealing with an international reference base for soil classification was held in Sofia in October with UNEP support. The meeting will expedite progress towards an international agreement on soil classification.

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53 Martin W. Holdgate, Mohammed Kassas and Gilbert F. White, eds., *The World Environment, 1972-1982*, Natural Resources and the Environment Series, vol. 8 (Dublin, Tycooly International Publishing, 1982), p. 255.

54 More information on developments related to the World Soils Policy can be found in document UNEP/GC.12/14.

55 FP/1106-80-03.

139. The UNEP/IFIAS "Save our Soils" project [56] was extended, at the request of IFIAS, up to the end of 1983. A number of case-studies on the social, economic and legislative constraints to proper soil management have been completed. IFIAS will soon be publishing a final report on the subject, describing the steps necessary to secure the application of technologies for the control of soil degradation.

140. The implementation of the UNEP/UNEPCOM project on the impact of agricultural management on the environment [57] continued throughout 1983. A map on the world's agrolandscape has been prepared, and a draft on "Natural dimensions of agricultural production" has been completed.

(e) Water (budget subline 1107)

141. In keeping with the spirit of Governing Council decision 11/7, part five, the Executive Director established in 1983 a UNEP Advisory Group on Water Resources, consisting of four eminent water specialists. The mandate of the Group is to advise UNEP on the development of a strategy for its water programme, the development of the implementation of the water programme and the implementation of Governing Council decisions concerning water. The Advisory Group held its first meeting in Geneva in mid-1983 and made recommendations with regard to the implementation of the water programme during the 1984-1985 biennium, with special emphasis on water pollution control, waste water management (including recycling of water), rational water management (including river basin management), support for the implementation of the programme for the International Drinking Water Supply and Sanitation Decade (IDWSSD) and development of inland fisheries and aquaculture. The Advisory Group also made suggestions concerning the general lines along which the water programme could be further developed.

142. UNEP was represented at the fourth session of the ACC Inter-Secretariat Group for Water, held in Rome in December 1983. The Group discussed a number of important issues, including progress in the implementation of the Mar del Plata Action Plan and the IDWSSD programme, an overview of the UN system's medium-term plans for water resources, with emphasis on management aspects, and technical co-operation among developing countries in water resources development. The Group also reviewed recently approved projects and discussed the co-ordination of UN system activities concerning standardization of engineering equipment in the field of water resources.

143. As a member of the IDWSSD Steering Committee for Co-operative Action, UNEP participated in the eleventh meeting of the Committee, held in Rome at the end of 1983. The UNEP representative submitted to the Committee a progress report on UNEP activities since the last meeting, stressing that more than half of the Programme's 11 ongoing water projects were directly related to the Decade. The main items on the agenda were a review of action taken by organizations in the UN system to promote the

56 FP/1106-81-02.

57 FP/1106-80-02.

goals of IDWSSD, human resources development and an evaluation of the role of women. Agreement was reached on action to be taken by UN agencies in the next phase of the Decade.

144. Emphasis was placed on strengthening the exchange of information among UN agencies, and the secretariat of the Steering Committee was urged to collect and analyse information about the various agencies' Decade-related activities. There was general agreement on the need for better definition of the main issues facing both governments and agencies at the present stage of the Decade. It was recognized that co-operative action at the country level was not progressing as well as expected, and agencies were urged to try to correct the situation, primarily by enhancing co-operation and co-ordination at the country level.

145. During 1983, UNEP continued its support to the International Training Centre for Water Resources Management (CEFIGRE).[58] An evaluation of this project was carried out to assess the progress to date and to recommend guidelines on future co-operation. As the relevant outputs of CEFIGRE cover one of the goals of UNEP in respect of training of professionals, UNEP plans to continue support to the Centre for specific training sessions, particularly those being held in developing countries, which are accorded high priority by the CEFIGRE International Scientific Council. The seventh session of the Council was held in Sophia Antipolis, France in June 1983, with the participation of UNEP.

146. On the occasion of the eighteenth General Assembly of the International Union of Geodesy and Geophysics, which was held in Hamburg, Federal Republic of Germany in August 1983, UNEP convened a working group on large-scale water projects to review country experience and develop recommendations for evaluation of the environmental impacts of large-scale water transfers, especially for developing countries. The working group, composed of 10 water experts representing all regions, together with representatives of UNESCO and UNEP, analysed a set of case-studies prepared by experts from Africa, Asia, Europe and north America. On the basis of these studies, the group made specific recommendations for the assessment and evaluation of the environmental and social impacts of large-scale water projects. UNEP will publish the proceedings and recommendations of the working group in 1984.

147. The implementation of the UNEP/UNESCO project on protection of the lithosphere as a component of the environment [59] continued throughout 1983. A representative of UNEP attended the third meeting of the International Scientific Council on the lithosphere, which was held in Moscow in December 1983. A draft monograph on hydrogeological bases of ground-water protection, which had been prepared jointly by UNEP, UNEPCOM and UNESCO, was reviewed and prepared for publication in 1984.

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58 Under project FP/1107-77-01. The seminars and training courses carried out by CEFIGRE, with UNEP support, are listed in annex IV.

59 FP/1107-79-04.

148. Under another project in this area,[60] UNEP supported the International Association of Hydrological Sciences in the organization of two symposia which were held within the framework of the eighteenth General Assembly of the International Union of Geodesy and Geophysics in Hamburg. One symposium, on the hydrology of humid tropical regions, addressed the hydrological aspects of tropical cyclones, the regional hydrology of the humid tropics, and the hydrological effects of agriculture and forestry. The second symposium focused on dissolved loads of rivers and surface water quantity/-quality relationships. The proceedings of the two symposia were published in 1983.

149. A UNEP report on rain and storm water harvesting in rural areas was published in 1983.[61] The report, which contains a summary compilation and evaluation of technologies relating to the collection, storage, treatment, distribution and use of rain-water and other forms of precipitation, has been distributed to Governments.

(f) Genetic resources (budget subline 1108)

150. During 1983 UNEP continued its support to the Microbiological Resources Centres (MIRCENs), the development of which was described in the 1982 Annual Report.[62]

151. Each of the six MIRCENs located in developing countries consists of a regional network of collaborating laboratories, with one laboratory serving as a co-ordinating centre. Each MIRCEN now maintains a regional gene bank for microbial resources, and distributes these resources to interested parties upon request, co-operating in this respect with the World Data Centre for Micro-organisms in Brisbane, Australia. Throughout the year under review, the regional MIRCENs, with the support of a large number of institutions and organizations, continued to organize training activities and to provide on-the-job training fellowships and grants for relevant applied research within each regional MIRCEN. For the purposes of disseminating information, each of the MIRCENs issues its own newsletter. In addition, the ICRO Panel on Applied Microbiology and Biotechnology (formerly the UNEP/UNESCO/ICRO Panel on Microbiology) produces an annual *MIRCEN News* to provide an overview of regional MIRCEN activities.

152. Within the framework of the MIRCEN project,[63] UNEP, in collaboration with UNESCO and other institutions and organizations, also continued to support the World Data Centre for Micro-organisms, which was established in order to promote access by all to information and stored data about culture collections, including those held in MIRCENs. To complement the Centre's efforts, UNEP convened, in Brussels in September 1983, in collaboration with the Commission of the European Communities and the National Foundation of Scientific Research of Belgium, an international work-

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60 FP/1107-83-01.

61 *Rain and Stormwater Harvesting in Rural Areas*, Water Resources Series, vol. 5 (Dublin, Tycooly International Publishing, 1983).

62 UNEP/GC.11/2, chap. IV, paras. 101-103.

63 FP/1108-75-03.

shop on the establishment of an international microbial strain data network. Some 40 experts and curators of culture collections in developed and developing countries who attended the workshop agreed that an international network of data on microbial genetic resources was not only feasible but urgently needed. The recommendations of the workshop are now under careful review by UNEP.

153. A state-of-the-art report on microbial technologies useful in combating desertification emanated from a UNEP-supported international workshop on the use of microbiological processes in arid lands for desertification control and increased productivity, held in October 1983 in Albuquerque and Santa Fe in the United States. Participants at the workshop agreed that increased productivity and/or rehabilitation of arid and semi-arid ecosystems could benefit significantly from the application of selected microbial genetic resources and selected microbial technologies, alongside other régimes. The recommendations of the workshop are being circulated to UN bodies, governments and the regional MIRCENs for their views.

154. UNEP participated in a UNIDO Ministerial-level Plenipotentiary Meeting on the Establishment of the International Centre for Genetic Engineering and Biotechnology, held in Madrid in September 1983. This centre promises to provide additional UN system-wide and global support to the regional MIRCEN network, and could help to meet the need for an international microbial strain data network.

155. The International Board for Plant Genetic Resources (IBPGR), supported by UNEP,[64] initiated in 1983 activities for the exploration and collection of crop plant genetic resources in Madagascar (food legumes and rice), Sri Lanka (finger millet, groundnuts, sesamum and sorghum) and Uganda (root crops), to complement earlier collections which covered Benin, Kenya, Malawi, Somalia, the United Republic of Tanzania, Yemen, Zambia and Zimbabwe. The material collected was deposited in various gene banks, including those forming part of the network housing the World Base Collection co-ordinated by IBPGR.

156. Accessibility to plant genetic resources at the major gene banks is being carefully studied by FAO, with a view to the establishment of an international gene bank and the drafting of an international convention on plant genetic resources. The adoption by the FAO Conference, in November 1983, of an International Undertaking on Plant Genetic Resources was an important move towards developing a co-ordinated network of national, regional and international centres to hold collections of genetic resources of important plant species for the benefit of the international community. To implement the Undertaking, FAO has established a new Commission on Plant Genetic Resources in which UNEP will participate as an observer.

157. In 1983, UNEP initiated preparations for a survey of gene banks in Africa, Asia and Latin America with the aim of identifying those which store plant genetic resources and ascertaining the extent to which they are collaborating with the network of gene banks developed by IBPGR. A consolidated report on the subject is planned.

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64 Under project FP/1108-82-01.

158. In forest genetic resources, FAO and UNEP have been collaborating since 1975 in the establishment of *ex situ* international stands for selected provenances of pine and eucalyptus species in several African and Asian nations. In 1983, 30-hectare *ex situ* conservation stands of *Pinus oocurpa* and *P. caribaea* were established in India, thus bringing to a close the joint FAO/UNEP project on the conservation of forest genetic resources.[65]

159. In May 1983, UNEP participated in a planning workshop held in Washington, with the support of the Commonwealth Forestry Institute, IBPGR, the International Council for Research in Agroforestry and the United States National Academy of Sciences, to discuss global needs and problems connected with the collection, storage and distribution of multi-purpose tree germ-plasm.

160. The joint FAO/UNEP Panel of Experts on Animal Genetic Resources Conservation and Management, in whose establishment UNEP played a catalytic role, held its first meeting in Rome in October 1983. The meeting included a special session on the use of cryogenic storage and genetic engineering for developing countries. A special publication is planned on this subject.

161. FAO, supported by UNEP, completed consultations on pilot conservation schemes for the Kenana and Butana breeds in the Sudan, trypanotolerant cattle in west Africa and sheep and goats also in west africa, and on the feasibility of developing a data bank in Africa.[66] The consultations also covered the possibility of inter-country co-operation for the genetic conservation of the Sahiwal breed of cattle, and pilot projects for the creation of data banks in Asia and Latin America.

162. A joint FAO/UNEP survey of the application of biological nitrogen fixation for enhancing soil fertility and increasing legume production in small farms in a number of developing countries in Africa, Asia and Latin America was concluded in 1983 with the support of regional MIRCENs.[67] UNEP, which is attaching high priority to biological nitrogen fixation, initiated in 1983 demonstration projects for increasing legume protein production in small farms through biological nitrogen fixation with the support of AGFUND and the Governments of Senegal, the Sudan and the United Republic of Tanzania, in close co-operation with the regional MIRCENs in Cairo, Dakar and Nairobi.[68] The projects were formulated with the aim of promoting the use of intensified biological nitrogen fixation to increase legume protein production while moving away from the use of costly and synthetic fertilizers at the small-farm level, where most of the production by rural communities takes place. Facilities for the development and application of relevant microbial technologies, including inoculum production and development, are being strengthened, local professionals and technicians are being trained and relevant information is being disseminated.

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65 FP/1108-75-05.

66 Under project FP/1108-82-02.

67 Under project FP/1108-82-03.

68 Under project CP/1108-83-03.

(g) Wildlife and protected areas (budget subline 1110)

163. The survival of many wild animal and plant species continues to be endangered by man—through indiscriminate hunting, the destruction of habitats, the expansion of agriculture, continued overgrazing by domestic livestock, and the presence of toxic chemicals in the environment. If present trends continue, thousands of species—especially of tropical plants and animals—will inevitably become extinct.

164. The extinction of animal and plant species represents an irreparable loss of biological diversity, with potentially serious environmental and economic consequences for developing and developed countries alike. Developing countries need continuing assistance in formulating and implementing national conservation strategies, which should include specific policies and programmes for the conservation of their biological diversity.

165. Throughout the year under review, UNEP continued to support [69] the IUCN Species Survival Commission and its more than 60 specialist groups in their role as major sources of monitoring data for the IUCN Conservation Monitoring Centre. The Centre is continuing to develop a data base on the status of, and trade in, wild fauna and flora included in the Red Data Book, and to disseminate such information to the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and other organizations and groups to assist them in pursuing conservation actions. Work on the UNEP/IUCN index to species dealt with in legislation has continued, and complete print-outs of both the fauna data base and the legislation analysis have been provided to the Conservation Monitoring Centre for use in relation to work on the Red Data Book.

166. More than 300 participants from 62 countries and numerous non-governmental organizations gathered in Gaborone in April 1983 for the fourth meeting of the Conference of the Parties to CITES. The meeting demonstrated the flexibility of CITES in promoting protective measures and, where necessary, facilitating legitimate utilization. The agreement to list several dozen plant species (cacti) in appendix I to the Convention reflected recognition of the significant threat posed by collectors to many thousands of plants.

167. The first of a series of seminars on the implementation of the Convention was held in Washington in August 1983 with participants from 23 countries in the Americas. The seminar, which was organized by the CITES secretariat, with the assistance of UNEP,[70] the Canadian and United States wildlife authorities and the United States branch of the World Wildlife Fund, dealt with individual countries' problems in implementing the Convention and methods of improving implementation both regionally and globally. Of special significance was a round-table forum of representatives from both trading and conservation organizations on the conservation of species under rational resource management. Two further seminars are projected, one in Brussels for Parties in the African region and one in Malaysia for Asian Parties.

69 Under projects FP/1110-80-01 and FP/1110-80-02.

70 Under project FP/1104-76-04.

168. In March 1983, the sixth meeting of the Association of South-east Asian Nations (ASEAN) Experts Group on the Environment was held in Indonesia to consider a draft ASEAN Agreement on the Conservation of Nature and Natural Resources, which had been prepared by IUCN with support from UNEP and the Government of Sweden. A document containing proposed amendments to the African Convention on the Conservation of Nature and Natural Resources, prepared by IUCN at the request of OAU with the support of UNEP and the Government of the Federal Republic of Germany, was discussed and finalized at a meeting in August 1983. The document was forwarded to OAU, which convened a governmental expert meeting in Addis Ababa to review it. It is expected that the draft amendments will be considered by the OAU Council of Ministers and eventually by the Assembly of Heads of State and Government.

169. UNEP/IUCN activities relating to national parks and protected areas [71] have continued to focus on promotion of the establishment of a world-wide network of effectively managed terrestrial, freshwater, coastal and marine protected areas, using the membership network of the IUCN Commission on National Parks and Protected Areas. At a working session in Zimbabwe in May 1983 the Commission reviewed progress in the preparation of a directory of Afro-tropical protected areas, examined the extent of coverage of the various biogeographical provinces by existing protected areas, and prepared a regional action plan on protected areas for Africa. The manuscripts of three books were finalized in 1983, on managing coastal and marine protected areas, managing protected areas in the tropics and training protected areas personnel. The books are scheduled for publication in 1984.

170. The first International Congress on Biosphere Reserves was convened jointly by UNEP,[72] UNESCO and the Government of the USSR, with the co-sponsorship of FAO and IUCN, in Minsk, USSR in September/October 1983. Some 300 conservation specialists, biosphere reserve managers, scientists and specialists in environmental monitoring, education and training from over 50 countries attended the Congress, which reviewed the progress achieved during the past decade and examined the current status of trends in biosphere reserves around the world, with a view to consolidating approaches to biosphere reserve establishment, research, monitoring, management, education and training. The Congress approved a draft action plan on biosphere reserves with 9 main goals and 41 specified activities, which will be submitted for discussion to the International Co-ordinating Council of the UNESCO Man and the Biosphere programme and subsequently transmitted to the governing bodies of FAO, IUCN, UNEP and UNESCO.

171. Recent joint work by IUCN and UNEP resulted in a document entitled "Culture and conservation", the essential message of which is that those responsible for environmental planning and conservation should pay closer attention to the local and regional cultural context, i.e. to both popular ideas and grass-roots actions.

172. The provision of expert assistance to governments in the development of national conservation strategies has continued. Over 30 countries have begun work on national

71 Projects FP/0502-80-01 and FP/1110-80-03.

72 Under project FP/1110-81-03.

conservation strategies since the World Conservation Strategy was launched in 1980. Expert missions sent to Belize, Nepal, Uganda and Zambia at the request of the Governments concerned, resulted in a series of recommendations and plans of action for implementing the Strategy. In addition, IUCN/UNEP consultants have been involved in assistance missions to India, Madagascar and Malaysia.

3. ENVIRONMENT AND DEVELOPMENT
(Budget line 04)

173. This subject area is divided into three programmes: (a) integrated approach to environment and development and environmental management; (b) environmentally sound and appropriate technology; and (c) industry and environment.

(a) Integrated approach to environment and development and environmental management (budget sublines 0404 and 1001)

174. Throughout the year, UNEP continued its efforts to provide methodological guidance on the integration of environmental considerations into decision-making on development. Significant additions were made to the guidance available on the application of social cost-benefit analysis to environmental measures and environmental aspects of development projects. The East-West Environment and Policy Institute of the University of Hawaii in the United States published a guide for planners entitled *Natural Systems for Development* elucidating the relationship between major specific ecological concerns of the developing countries and development policies. The Institute also produced a guide entitled Environment, Natural Systems, and Development: An Economic Valuation Guide. These guides, the fruit of a multidisciplinary team effort, including workshops with the participation of personnel from developing countries, are an attempt to bridge the gap between development decision-making and evolving perceptions on environmental changes in developing countries.

175. Drawing on the results of intergovernmental expert workshops and case-study materials made available by governments, UNEP published in 1983 the first volume of a report intended to explain and promote the use of social cost-benefit analysis in the formulation of development projects.[73] In a companion volume case-study analyses will serve to illustrate the practical use of the method in specific development projects. UNEP also published and disseminated a report which examines problems and procedures in applying cost-benefit analyses to environmental measures and planning in relation to development.[74]

176. UNEP's efforts to establish a training course in this field for personnel from developing countries at one of the member institutions of the Committee of International Development Institutions on the Environment (CIDIE) have not yet borne fruit. However, the East-West Environment and Policy Institute, in co-operation with the World Bank, has been developing a pilot course with similar objectives, which is scheduled for May

73 Yusuf J. Ahmad, ed., *Environmental Decision-Making* (London, Hodder and Stoughton, 1983).

74 Yusuf J. Ahmad, ed., *Managing the Environment*, UNEP Studies, No. 7 (Nairobi, UNEP, 1983).

1984; the experience gained will undoubtedly be of benefit in similar undertakings elsewhere. UNEP will be supporting attendance by some trainees from developing countries.

177. The use of environmental impact assessment methodology in the analysis of development projects is spreading in the developing countries. In order to facilitate the exchange of information in this field among developing country personnel and to prepare guidance on simplified, cost-effective approaches to environmental impact assessment, UNEP, in co-operation with the Government of China, convened a meeting of experts in Guangzhou in March 1983. The participants discussed a number of case-studies dealing with development in various sectors, and discussion focused on the problems and possibilities of applying available methodologies in developing countries. The meeting also helped to consolidate guidelines for the effective use of this technique in developing countries.

178. Following a survey of available literature, work was completed on two draft handbooks commissioned by UNEP on environmental impact assessment procedures, bearing in mind the specific needs of the developing countries. Final versions are to be published after review and revision.

179. UNEP collaborated with ECE and UNDP in the preparation of guidelines for aesthetic and environmental impact assessment for the Trans-European Motorway.[75] This comprehensive study, in three volumes, seeks to illustrate in detail the application of the techniques of environmental impact analysis and social cost-benefit analysis to development in the transport sector. The study is a model of co-operation, in terms of provision of data and participation in intergovernmental expert meetings, among the countries to be linked by the planned motorway, namely, Austria, Bulgaria, Czechoslovakia, Greece, Hungary, Italy, Poland, Romania, Turkey and Yugoslavia.

180. Another illustration of the application of environmental impact assessment to a sector of development was provided by a pilot case-study prepared in 1983 by UNEP in co-operation with the Republic of Korea, on Gwachon New Town Development. The pilot study represents an application to urban development of the Environmental Impact Assessment Test Model developed by the UNEP Regional Office for Asia and the Pacific. Under another project, [76] guidelines on environmental impact assessment for urban development and a simulation model applicable to the "industrial touristic corridor" between Rio de Janeiro and Sao Paulo were developed. A workshop was also held on the application of environmental impact assessment in urban development for Latin American participants in April/May 1983.

181. The joint project on the assessment of the environmental implications of the Salto Grande multi-purpose hydraulic development scheme [77] provided an example of methodological guidance on *ex post facto* evaluation of the environmental consequences of a

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75 Under project FP/1001-82-01

76 FP/1001-79-03.

77 FP/1000-78-02.

major development project and the utilization of such guidance in the design of an environmental management programme. The final report of the project was completed in 1983, and provides information on environmental impact assessment in terms of climatic variations, soil, water, vegetation, wildlife and fish; it also examines the implications of environmental impact assessment for regional development and land use planning.

182. At the university level, numerous initiatives are being taken in training and the exchange of information on the application of environmental impact assessment to development programmes. For example, the Environmental/Ground Water Institute of the University of Oklahoma in the United States has begun regular publication of a *Worldletter* on environmental impact assessment which contains information on various aspects of and experience in the use of the technique. The Centre for Environmental Management and Planning of the University of Aberdeen in the United Kingdom held an international seminar on environmental impact assessment in July 1983 in co-operation with WHO and UNDP, and plans to hold an international training course on environmental impact assessment and land use planning, in co-operation with the East-West Center of the University of Hawaii, UNEP and UNESCO, in January 1984.

183. In pursuit of rapid ecconomic development, several developing countries have encountered serious environmental problems relating to congestion and pollution, particularly in urban areas. In an attempt to ameliorate such problems, several interesting experiments have been carried out in the integration of environmental, physical, social and economic planning in some developed countries. In order to analyse this experience and make it available to developing countries, UNEP, in co-operation with the United Nations Centre for Regional Development, the United Nations Department of Technical Co-operation for Development and the Government of Japan, initiated in 1983 a project [78] which provides for the preparation of a case-study and analytical report on recent economic development in the Chubu region of Japan. The objective of this exercise is to prepare guidelines for integrated physical, environmental, economic and social development in a situation with a fragile ecosystem and high population density.

184. Transnational investment, if uncontrolled, can at times cause serious harm to the environment and natural resource base of the country in which the investment is made. Although such investment may help developing countries to accelerate their economic growth, there is a need to ensure that the resulting development is environmentally sustainable. With this axiom in mind, UNEP has agreed with the United Nations Centre on Transnational Corporations to conduct an analytical overview of environmental aspects of transnational investment in various sectors and, on the basis of that overview, to prepare [79] principles and guidelines for such investment to ensure that it is environmentally sound. The overview and the principles and guidelines will be incorporated in the Code of Conduct on Transnational Corporations, observance of which is monitored by the Centre.

185. With a view to promoting technical co-operation among developing countries in

78 FP/0404-83-01.

79 Under project FP/0404-83-02.

the integration of environmental considerations in development planning, UNEP, in co-operation with ECLA, has begun the preparation of a number of case-study analyses in various ecological contexts in Latin America.[80] The countries co-operating with UNEP in this undertaking are Argentina, Chile, Colombia, Ecuador, Mexico, Peru and Uruguay. The ultimate aim is to help establish and sustain a network of institutions in Latin America that will promote technical co-operation among developing countries in environmental assessment and management for development.

186. The Committee of International Development Institutions on the Environment (CIDIE) [81] held its fourth meeting in May 1983 and reviewed the implementation of the 1980 Declaration of Environmental Policies and Principles Relating to Economic Development signed by its members. The European Investment Bank became a new signatory to the Declaration and the tenth member of the Committee. Among the main subjects discussed at the meeting were the UNEP clearing-house initiative; environmental considerations at various stages in the project cycle; CIDIE training activities; observer status at CIDIE meetings; environmental policies of the member institutions relating to the forestry sector; environmental guidelines for development projects; environmental education and training; and the role of CIDIE. Papers were prepared and distributed on analysis of development agency procedures and guidelines for planning and assessment, environmental education and training in and for developing countries, and environmental policies and programmes relating to the forestry sector. These reports seek to pave the way for a better exchange of information and co-ordination among CIDIE members on policies and procedures for taking environmental considerations into account in development programmes.

187. The International Planned Parenthood Federation resolved, at its Members' Assembly held in Nairobi in November 1983, that its affiliated bodies would increasingly adopt an integrated approach to people, natural resources and environment. UNEP was represented at the Assembly, and agreed with the Federation and IUCN to co-operate in promoting such an integrated approach.

(b) Environmentally sound and appropriate technology (budget subline 0402)

188. No new activities were undertaken under this heading during the year under review, as the system-wide medium-term environment programme contains no specific budget lines for technology. The major efforts in this field were therefore directed towards the completion of a number of existing projects.

189. The water hyacinth management project [82] was completed with significant results, particularly in respect of the biological control of water-weeds and the use of the water hyacinth for treatment of waste water from industrial activities, production of paper and board, biogas and composting, production of cement boards and animal feed. The project

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80 Under project FP/0404-82-05

81 Secretariat services for the Committee are furnished by UNEP under project FP/1001 82 03.

82 FP/0402-79-01.

culminated with the convening in Hyderabad, India, in February 1983 of the first International Conference on the Water Hyacinth, sponsored by the Commonwealth Science Council, the Council of Scientific and Industrial Research (India) and the United Nations Financing System for Science and Technology for Development, through the Regional Centre for Technology Transfer in Bangalore, India, the Department of Science and Technology (India), the Committee on Science and Technology in Developing Countries (India), the International Development Research Centre in Singapore and UNEP. A total of 70 technical papers and case-studies were presented to the Conference, which was attended by 140 participants from 34 countries. The proceedings are being prepared for publication.

190. Under a joint UNEP/ILO project on food processing technologies,[83] in addition to the published technical memorandum on small-scale fish processing, four new technical memoranda were finalized in 1983, in co-operation with ILO and FAO, on small-scale processing of meat, pork, fruit and vegetables. The four memoranda are to be published jointly by UNEP and ILO.

191. During 1983, work continued on a project on the recycling of maize processing waste,[84] with a view to recovering useful protein, for use as animal feed, from the waste water produced. Sampling of effluent (*nejayote*) from small and medium-sized maize mills was carried out and a complete chemical analysis conducted. A laboratory-scale 55-litre bioreactor was installed at the Institute of Engineering in the National University of Mexico, and arrangements have now been completed to install a pilot plant in one of the maize mills in Mexico City.

192. Throughout the year under review, UNEP participated in and monitored the activities of the UN system in the field of science and technology, specifically those related to the implementation of the Vienna Plan of Action on Science and Technology for Development, adopted by the 1979 UN Conference on Science and Technology for Development, and the joint activities planned by the ACC Task Force on Science and Technology for Development. These activities included an International Symposium on Further Training in Science and Technology Planning, organized by UNESCO and the Foundation for International Development of the Federal Republic of Germany in West Berlin in June 1983; a Technical Workshop on Methodologies for Determination and Testing of Indicators of Technological Development, organized by the UN Centre for Science and Technology for Development in Paris in November 1983; work on a global and international network for the exchange of scientific and technological information; and the contribution of case-studies for a portfolio on the blending of emerging technologies with traditional technologies being prepared by numerous bodies within the UN system for submission to the UN Advisory Committee on Science and Technology for Development.

83 FP/0402-80-02

84 FP/0402-82-01

(c) Industry and environment (budget subline 0408)

193. The environmental impact of industrial activities, and particularly the risks to the environment and human health created by pollution of industrial origin, received continued attention from UNEP during the year under review. Interest has grown in the role that industry could play in such fields as the fight against acid precipitation, trade in hazardous substances and waste management, and this interest has been reflected in recent United Nations decisions. A start has been made on a survey of industry's experience with environmental management in different conditions in various parts of the world, in preparation for the World Industry Conference on Environmental Management.

194. This Conference, to be organized jointly by industry and UNEP in pursuance of Governing Council decision 11/1, is scheduled to take place in Paris in November 1984. A Committee of Convenors has been established, composed of chief executive officers and chairmen of the boards of major industrial corporations and business institutions, high-ranking government officials, leaders of non-governmental organizations and other international figures. A global fund-raising campaign has been launched; it is envisaged that the cost of the Conference will be met primarily by voluntary contributions from industry. Documentation is being prepared through a process of consultations between industry and governments aimed at reflecting in a balanced way the achievements, priorities and concerns of business and government, and of developed as well as of developing countries. The three-day Conference will review the achievements of industry with regard to environmental management, examine opportunities for and constraints on industrial development in the light of environmental requirements, and identify issues for future concerted action by industry, governments and intergovernmental and non-governmmental organizations, as well as approaches and machinery needed to further such efforts.

195. The sixth and last in the series of regional training workshops on environmental management in the pulp and paper industry was held in 1983. In this series of workshops, organized by UNEP, with funding support from the Swedish International Development Authority, a total of 192 participants from developing countries have been trained. Moreover, each of these participants received training material, including audio-visual aids, which many have already used to conduct national training workshops at no cost to UNEP. A meeting of the UNEP Environmental Consultative Committee for the Pulp and Paper Industry in 1983 set out guidelines for UNEP activities in this field for the next two years.

196. The Economic Commission for Africa co-operated with UNEP in holding the fourth regional workshop on industrial environmental impact assessment and environmental criteria for industrial siting; one more workshop is planned.

197. Work in a new sector of activity began at a joint WTO/UNEP workshop on the environmental aspects of tourism, held in Madrid in July 1983. The workshop recommended the preparation of operational guidelines for different areas of tourism; increasing co-operation between the public and private sectors for the development of tourism; and studies on the carrying capacity of tourism resources to ensure the conservation of the

natural and cultural environment.

198. Five issues of the *Industry and Environment* newsletter were mailed in 1983 to 12,000 readers the world over, a circulation increase of 20 per cent over 1982. The newsletter is now published in English, French and Spanish. Three sets of guidelines and a technical review were published for the agro-industrial and iron and steel sectors.

199. A successful co-operative programme involving industry and governments was implemented in 1983 in Tunisia, where industrial experts from the United States contributed their time for diagnostic missions in several industrial sectors.

200. Throughout 1983 UNEP continued to co-operate with organizations such as the Cadmium Association, the International Chamber of Commerce, the International Lead and Zinc Research Organization, the International Permanent Bureau of Automobile Manufacturers, the International Petroleum Industry Environmental Conservation Association, the International Primary Aluminium Institute and the Lead Development Association in the preparation of overviews, technical reviews and guidelines, as well as in the preparations for the World Industry Conference on Environmental Management.

4. OCEANS
(Budget line 05)

201. Under this budget line, UNEP has three programmes: marine pollution, living marine resources and regional seas. Although this budget line appears under the general heading of "environmental management" it also involves numerous monitoring aspects, carried out in conjunction with GEMS.

(a) Marine pollution (budget subline 0501)

202. During 1983, UNEP continued to concentrate on the assessment of marine pollution problems and on generating the data necessary to make such assessments.

203. The Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) received support from UNEP to review various aspects of marine pollution problems, including the identification of sources, pathways and trends of marine pollution and the impact of such pollution on marine ecosystems, human health and amenities.

204. At its thirteenth session GESAMP assessed the hazards connected with harmful substances carried by ships, and studied the effects of thermal effluents in the marine environment. It also began the development of an oceanographic model for the dispersion of waste disposed of in the deep sea, and examined the marine pollution implications of ocean energy exploitation.

205. In response to Governing Council decision 11/1 UNEP participated in an interagency meeting held in Vienna in September 1983 on the establishment of a data base against which scientific and technical considerations related to the dumping of radioactive waste at sea could be reviewed. The participants studied and classified the relevant

scientific literature, which will in due course be transmitted to a meeting of experts from the contracting parties to the London Dumping Convention.

206. Requirements connected with an integrated global ocean monitoring programme were reviewed at an international symposium organized in Tallinn, USSR, in October 1983. The symposium recognized the success of monitoring activities undertaken by the UNEP regional seas programme, and expressed support for the regional approach to environmental research and monitoring as a vital element in integrated global ocean monitoring within the framework of GESAMP. The symposium also made a number of recommendations about how an integrated global ocean monitoring programme might be set up. (See also paragraph 18 above.)

(b) Living marine resources (budget subline 0502)

207. The efforts of UNEP in this area have been concentrated on the finalization of a global plan of action for the conservation of marine mammals.[85] The aim of this activity, a joint undertaking between UNEP and FAO, was to develop a world-wide programme of conservation-oriented activities for whales, seals and other endangered marine mammals that could attract funding at a level sufficient to ensure the rational utilization of these important marine resources and, at the same time, ensure the survival of all species. Governments have been requested to indicate in what way they wish to contribute to the implementation of the plan, and the financial plan requested by the Governing Council in decision 11/7, part one will be drawn up in the light of the replies received from Governments.

208. Specific activities supported by UNEP in 1983 in connection with the plan of action included two expert meetings to formulate research proposals for cetaceans and sirenians, a review of available information on the interaction between marine mammals and fisheries (to be published by FAO during the first half of 1984) and a compendium of legislative texts dealing with the conservation, management and utilization of marine mammals (to be completed in 1984).

209. UNEP also participated in an inter-agency consultation in preparation for the World Conference on Fisheries Management and Development, scheduled to take place in Rome in June 1984. Technical preparations for the Conference were made in an expanded meeting of the FAO Committee on Fisheries in October 1983, with participation by 122 Governments and 30 international organizations, including UNEP. Five specific action programmes were agreed in fisheries management and development, development of small-scale fisheries, aquaculture, trade in fish and fisheries products, and promotion of the role of fisheries in alleviating undernutrition. The Committee called on all Governments and international organizations to participate actively in the implementation of the action programme and give concrete support to it.

210. During 1983, UNEP assisted IUCN to continue its biophysical classification of coastal and marine environments based on the natural variability of ecosystems.[86]

85 Under project FP/0502-78-02.

86 Under project FP/0502-80-01.

(c) Regional seas programme (budget subline 0503)

211. The co-ordination of activities under the various regional seas action plans, involving 11 regions and more than 120 coastal States, continued throughout 1983. A brief description of the major achievements in each of the 11 regions (which are indicated in figure X) is given below.

212. *Mediterranean.* The long-term pollution monitoring and research programme became operational in 1983. The first phase of the Blue Plan was completed, providing a comprehensive picture of the state of the environment and development in the region, and proposals for a second phase were prepared. The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources entered into force on 17 June 1983.

213. *Kuwait Action Plan region.* UNEP continued to assist the Regional Organization for the Protection of the Marine Environment to co-ordinate the implementation of five major projects in co-operation with FAO, IAEA, IOC, IUCN and UNESCO. The Marine Emergency Mutual Aid Centre in Bahrain convened several technical meetings in 1983 to formulate surveillance programmes to determine the extent of oil pollution in the region.

214. *Caribbean.* Fourteen mainland and island countries and the European Economic Community have signed a framework convention and a protocol on co-operation in combating oil spills in the region. At the third meeting of the Caribbean Action Plan Monitoring Committee, several projects were chosen for immediate initiation, with finance from the Caribbean Trust Fund. These projects will be implemented in co-operation with ECLA, IMO, IOC, UNESCO, WHO, the Caribbean Community, the Caribbean Conservation Association and the Governments of Cuba and Mexico.

215. *West and Central Africa.* Implementation of three priority projects dealing with marine pollution, contingency planning for pollution emergencies and coastal erosion control continued in 1983 in co-operation with FAO, IAEA, IMO, IOC, UNESCO, UNIDO, WHO, the United Nations and national institutions and experts.

216. *East Africa.* A draft regional convention and two protocols were prepared and reviewed by a meeting of government experts in December 1983. The experts also prepared country reports on the status of natural resources and conservation, environmental legislation and socio-economic activities. The reports were collated by FAO, IUCN and UNEP into regional reviews.

217. *Red Sea and Gulf of Aden.* UNEP continued its support to marine pollution assessment activities through ALECSO. Implementation of the action plan is continuing, with environmental assessment and management activities in a number of the member countries.

218. *South-west Pacific.* During 1983, two regional meetings of legal and technical experts from 19 Pacific States were held in Nouméa to revise a draft regional convention and two associated protocols, which are expected to be submitted to the Governments of

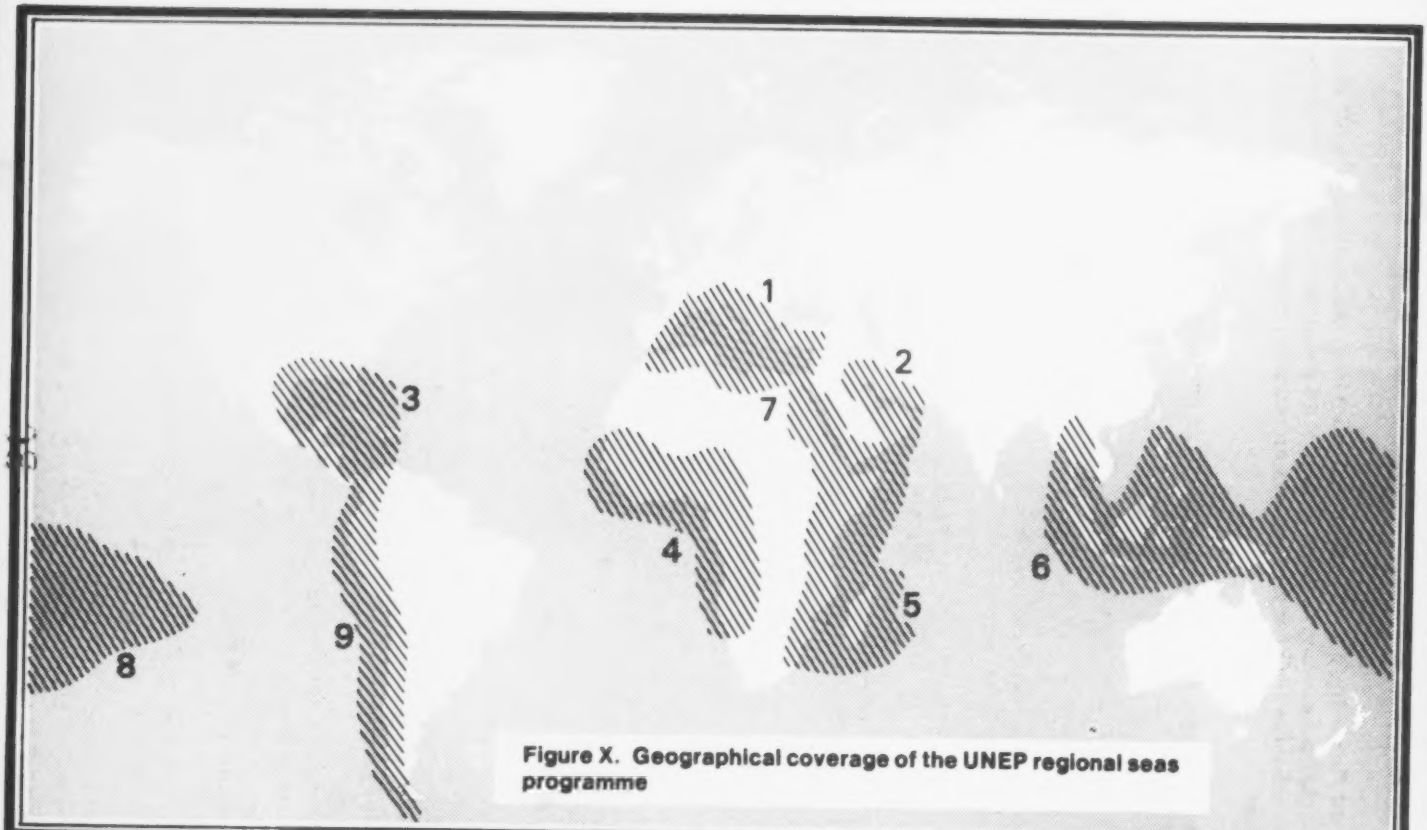

Figure X. Geographical coverage of the UNEP regional seas programme

1. Mediterranean region (Action Plan adopted 1975; Regional Convention signed 1976)
2. Kuwait Action Plan region (Action Plan adopted 1978; Regional Convention signed 1978)
3. Caribbean region (Action Plan adopted 1981; Regional Convention in preparation)
4. West and Central African region (Action Plan adopted 1981; Regional Convention signed 1981)
5. East African region (Action Plan preparation initiated)
6. East Asian region (Action Plan adopted 1981)
7. Red Sea and Gulf of Aden region (Action Plan adopted 1982; Regional Convention signed 1982)
8. South-west Pacific region (Action Plan prepared for adoption in 1982)
9. South-east Pacific region (Action Plan adopted 1981; Regional Convention adopted 1981)
10. South-west Atlantic region (Action Plan preparation initiated)

the region for approval in 1984.

219. *South-east Pacific.* In July 1983 plenipotentiaries from the south-east Pacific countries adopted a regional contingency plan to control oil pollution in cases of emergency. They also adopted three regional programmes on research, monitoring and control of marine pollution.

220. *South-west Atlantic.* A visit to the region by an inter-agency exploratory mission is planned in early 1984.

221. *East Asian Seas.* During 1983, five regional projects became operational in the region.

222. *South Asian Seas.* Activities were initiated in 1983 towards the development of an action plan in the south Asian seas.

5. ENERGY
(Budget line 07)

223. In 1983, UNEP completed a draft of the fourth part ("Data for the comparative assessment of the environmental impacts of energy sources") of a comprehensive study on environmental impacts of the production and use of energy sources.[87] The draft was subsequently reviewed by a working group at a meeting in December in New York organized jointly by UNEP and the Brookhaven National Laboratory with the support of IAEA and WHO. It complements the three preceding reports and includes data that have recently become available. As the end use approach was found to be the most appropriate for presenting comparative assessment data on environmental impacts of energy sources, the environmental impacts of the different stages (extraction, processing, transport and conversion into energy) of various fuel cycles (nuclear, coal, oil, natural gas, coal gasification, coal liquefaction, oil-shale, tar sand, fuelwood, peat, geothermal, hydro, tidal, wind, solar photovoltaics, solar thermal and biogas) were tabulated and compared for the production of 1 TWh of electrical energy, heat and mechanical energy. The environmental aspects of co-generation were also considered. The last chapter of the report is devoted to environmental issues of global concern: carbon dioxide, acid rain, oil pollution and radiation. The report contains an annex on comparative risk assessment of the environmental aspects of the production and use of energy. Publication is scheduled for 1984.

224. An expert group meeting on energy supply and demand in rural areas of developing countries was convened by UNEP in September 1983 in Bangkok,[88] and produced a set of concise guidelines for surveys to estimate energy supply and demand in rural areas and for matching supply with demand.

225. Also in September 1983 in Bangkok, an expert group meeting on energy storage systems in developing countries was organized jointly by ESCAP, UNEP and the Techni-

87 Under project FP/0700-79-01.

88 Under project FP/0700-79-02.

cal Research Centre of Finland.[89] Participants discussed a draft report on the subject covering energy storage through pumped water, compressed air, thermal energy, biogas, electrochemical batteries, kinetic energy and electric energy in superconducting magnets. They also reviewed the current development stage of each system, its applicability to developing countries and its economic as well as environmental aspects. It was generally agreed that pumped-water storage, thermal storage, biogas and electrochemical batteries have reached such a stage of development that their application in developing countries can be considered, subject to need, natural resources and other local conditions. Emphasis was placed on the advantages of conserving energy, particularly by levelling the energy load and thus minimizing peak load demand, levelling the supply from intermittent sources, such as solar radiation and wind, and decreasing the environmental impacts of energy production and use by shutting down peak load plants and harnessing renewable energy sources. The report of the meeting is scheduled for publication in 1984.

226. In November 1983, UNEP convened in Geneva an International Workshop on Energy Conservation in Developing Countries,[90] which was attended by experts from 19 countries as well as representatives from ECE, ECWA and FAO. Among the key actions identified which would assist developing countries in conserving energy were the integration of energy conservation into overall national development plans; rationalization of the use of energy sources; provision of adequate legislative and institutional frameworks to support energy conservation efforts; development of energy-pricing strategies to eliminate energy waste; allocation of funds for investment in energy efficiency improvements and development of incentives for such improvements; and the establishment of educational and promotional programmes and information systems to increase awareness of the relevance and importance of energy conservation. The participants also considered financial constraints, but stressed that with the help of an effective educational programme and improved housekeeping, maintenance and the modification of existing equipment to enhance energy efficiency, considerable savings could be achieved in the short term. The environmental aspects of some new technologies for energy conservation should be studied, taking into consideration prevailing conditions in the developing countries. The report of the Workshop, which includes guidelines for the conservation of energy, will be published in 1984.

227. A UNEP project on the feasibility of harnessing renewable sources of energy in Indonesia [91] continued with the construction of biogas demonstration plants in five locations using three different types of dung. A report on that phase of the project is being prepared for publication in 1984.

228. The principal purpose of a UNEP project on biomass gasification for rural development,[92] launched in the Philippines in October 1982 and continued throughout 1983, is

89 Under project FP/0700-82-02.

90 Under project FP/0700-79-04.

91 FP/0700-79-05.

92 FP/0700-82-03.

to demonstrate the technical, economic and environmental viability of biomass gasification technology in remote and energy-deficient villages. Through this project, it is hoped that the local fishermen can become more self-reliant by developing, among other things, a vapour compression refrigeration system powered by a gasifier, which could provide fuel to replace the petrol currently required to run the system. A report on the technical economic and environmental aspects of the gasifier is being prepared for publication in 1984.

6. NATURAL DISASTERS
(Budget line 1200)

229. In accordance with Governing Council decision 11/7, part one, requesting the Executive Director to "exercise restraint" in allocating funds to activities in this area, no new projects were started after the Council session in May. UNEP was involved in three ongoing projects related to natural disasters during 1983.

230. An Expert Meeting on Space Applications for Acquisition and Dissemination of Disaster-related Data was organized in June 1983 in Geneva by UNDRO, in co-operation with UNEP.[93] In addition to making recommendations for the utilization of space technologies and operational techniques in disaster relief operations, the experts adopted a plan of action, based on prevention and preparedness programmes, for the development of appropriate space systems and the application of current satellite-related technology and data for disaster management. The report of the meeting will be published by UNDRO in early 1984.

231. Work on a preparatory study on the creation of an international mobile early warning system or systems for volcanic eruptions and seismic activities was commenced by UNDRO and UNESCO in co-operation with UNEP in December 1982.[94] The project has been rescheduled, and is now due to end in May 1984. The study will include a plan for international mobile early warning systems in Africa, the Americas, Asia and the Pacific and the Mediterranean. The long-term objectives are the transfer and application of advanced early warning techniques which have been shown to be feasible in Japan and the United States.

232. An International Symposium and Study Tour on Continental Seismicity and Earthquake Prediction was held in Beijing in September 1982.[95] The proceedings of the Symposium, which are being prepared with UNEP assistance and are scheduled for publication in 1984, will be used to disseminate knowledge about techniques for earthquake prediction.

233. UNEP also commissioned a consultant's report to be submitted as a background paper for an ECA/UNDRO/OAU meeting on disaster prevention and preparedness in Africa scheduled to be held in Addis Ababa in March 1984.

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93 Under project FP/1200-83-01.

94 Under project FP/1200-82-01.

95 Under project FP/1200-82-02.

7. ENVIRONMENTAL LAW
(Budget subline 1002)

234. There was a clear shift in the focus of UNEP activities in this area during 1983 from nature conservation to man-made environmental problems, in particular the management of chemicals. The *Ad hoc* Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer, which met in Geneva in April and October 1983,[96] produced a revised draft text, two draft technical annexes and a separate draft protocol for the control, limitation and reduction of the use and emissions of fully halogenated chlorofluorocarbons. It is hoped that, after a further meeting in 1984, the drafts will be ready for submission, through the Governing Council, to the General Assembly.

235. Another *Ad hoc* Working Group of Experts, this one on the protection of the marine environment against pollution from land-based sources, met in Geneva towards the end of 1983 [97] for a first round of discussions on global guidelines and draft technical annexes. The meeting was especially timely in view of the recent entry into force of the 1980 Athens Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources, and the adoption of another UNEP-sponsored protocol on the same subject for the south-east Pacific region in Quito in July 1983.

236. Under the same project an advisory panel of legal and technical experts met in October 1983 to review the working documents for two further *ad hoc* working groups scheduled to meet in February/March 1984, to consider guidelines on the environmentally sound management of hazardous wastes and guidelines for the exchange of information on potentially harmful chemicals in international trade. Valuable inputs for these working group meetings were received from a number of other international organizations active in this field, including ECE as well as CMEA, FAO, OECD and WHO, from several non-governmental organizations and especially from the chemical industry associations directly concerned.

237. With consultant assistance, preparatory work was initiated on other priority topics identified in the Montevideo Programme for the Development and Periodic Review of Environmental Law [98] adopted at the 1981 *Ad hoc* Meeting of Senior Government Officials Expert in Environmental Law, particularly on the protection of international water resources against pollution (inter-agency consultations held in December 1983) and on guidelines for environmental impact assessment (working group meeting scheduled for 1984).

238. With the aim of promoting wider international adherence to existing environmental conventions, a 525-page collection of environmental legislation [99] was published in

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96 Under project FP/1002-81-03.

97 Under project FP/1002-82-02.

98 UNEP/GC.10/5/Add.2, annex, chap. II.

99 Alexandre Charles Kiss, ed., *Selected Multilateral Treaties in the Field of the Environment*, UNEP Reference Series, No.3 (Nairobi, UNEP, 1983).

English and French and distributed to all Governments. In pursuance of Governing Council decision 11/7, part two, a revised loose-leaf edition of the "Register of international treaties and other agreements in the field of the environment" [100] has been prepared in all official languages for submission to the Council at its twelfth session. The Register now provides summary information on the content and current membership of 112 multilateral conventions and protocols, on the basis of data regularly obtained from depositaries and member Governments.

239. Among the global conventions under the responsibility of UNEP, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) now has a membership of 84 States, making it the most widely accepted conservation treaty in existence; under an amendment adopted in Gaborone on 30 April 1983, membership will be extended to the European Economic Community. The 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals entered into force on 1 November 1983, and the first conference of parties will be convened in 1985.

C. SUPPORTING MEASURES

240. In addition to the two arms of the environment programme, namely environmental assessment and environmental management, there are other activities which fall under a third, general category entitled Supporting measures. The UNEP medium-term plan for 1982-1983 lists three programmes under this heading: environmental education, environmental training and information.

241. Environmental education and training continued to be the principal vehicles for promoting environmental awareness. Regional and country reports, which have appeared since 1977 mainly in the joint UNEP/UNESCO environmental education newsletter *Connect*, continue to demonstrate increased awareness of the necessity of environmental education in all regions. Increasing interest in environmental education may also be seen in the number of requests for assistance, advice, materials and support received by UNEP from governments, educational institutions, non-governmental organizations and individuals, as well as in the number of publications and meetings devoted to this field. During 1983, UNEP continued to render assistance in response to these requests, within its available resources. As in the past, it continued to maintain close contact and co-operation with UNESCO in its activities in this field.

242. A notable development during the year under review was the convening of the first meeting of the Advisory Panel of Experts on Environmental Education and Training. The primary objective was to develop basic principles for environmental education and training which could serve as a framework for developing programmes, activities and materials in this field. The exercise will be continued into 1984, as much remains to be done to make the UNEP programme in this field more effective and efficient.

1. ENVIRONMENTAL EDUCATION
(Budget subline 0305)

243. Throughout 1983, the Programme's major activities in the area of environmental

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100 UNEP/GC/INFORMATION/11. Both publications were prepared under project FP/1002-79-02.

education continued to be guided by the recommendations adopted at the Intergovernmental Conference on Environmental Education, held in Tbilisi, USSR, in October 1977. Accordingly, they focused on the integration of an environmental dimension into education programmes, curricula and teaching materials; the promotion of research and experimentation and application of the results; the extension of environmental education facilities to all levels of society; and the promotion of effective co-ordination in this field among institutions, nations and regions.

244. The joint UNEP/UNESCO International Programme in Environmental Education,[101] now in its eighth year, continued to promote environmental education activities in co-operation with governments, regional, subregional and national institutions and non-governmental organizations. The main activities under this project relate to the training of education personnel, mainly through workshops, research and experimentation, pilot projects, meetings and publications and reports.

245. To date, assistance to governments on environmental education has been provided mainly through the work of regional advisers attached to each of the UNESCO Regional Offices for Education. However, consultations have begun between UNEP and UNESCO with a view to improving the International Programme so that it can better serve the needs of Governments, in keeping with the decisions of the Governing Council in this field.

246. Work on the joint UNEP/IUCN project on promoting conservation education through the membership of the IUCN Commission on Education [102] continued until completion in December 1983.

247. In accordance with Governing Council decision 10/25 A, a meeting of experts from governments and the scientific community was convened in Nairobi in April 1983 to develop a programme of action for environmental education and training in Africa. The draft programme of action produced contains 18 recommendations aimed at assisting governments to develop environmental education and training programmes that are in keeping with their level of socio-economic development.[103]

2. ENVIRONMENTAL TRAINING
(Budget subline 0306)

248. Environmental training components are part and parcel of many projects throughout the UNEP programme, as can be seen from the list of meetings which appears in annex IV, and the reports on the various budget lines and sublines in earlier sections. The following are a few examples: INFOTERRA organized three training courses, one each for English-speaking, French-speaking and Spanish-speaking national focal points, with 40 participants in all. Three training courses in desertification control, specifically on ecological studies, soil erosion and water conservation, and sand dune fixation, en-

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101 Funded under project FP/0305-82-01.

102 FP/0305-80-01.

103 More details on this activity are contained in document UNEP/GC.12/13.

riched the knowledge of 75 technicians from developing countries. Under the regional seas programme 185 participants were trained in eight separate training courses held in the various regions. IRPTC, in conjunction with UNEPCOM, held an international training course for 20 participants from developing countries in preventive toxicology.

249. Additionally, there is a set of activities under the specific environmental training subline. Environmental training has continued to focus on promoting environmental management knowledge and skills for decision-makers, key personnel and professionals whose activities have an impact on environmental quality. To achieve maximum effect with limited resources, UNEP has accorded priority to the systematic incorporation of environmental components into the training activities of the UN system, whether those activities are undertaken directly by a UN agency or are carried out by a training institution with UN support.

250. An international post-graduate course on resource management and environmental impact assessment in developing countries,[104] organized by UNEP, UNESCO and the Government of the German Democratic Republic, commenced in October 1983 at the Technical University of Dresden with 15 participants. Also during 1983, the environmental training packages produced under a joint UNEP/ILO project for the introduction of an environmental training component within ILO management development programmes [105] were used after adaptation in six major management institutions in Asia and the Pacific.

251. UNEP also continued to co-operate with the International Centre for Training in Environmental Sciences (CIFCA), a major institution providing environmental training for participants from developing nations of Latin America and the Caribbean.

252. Efforts to develop the regional training programmes in Africa, Asia and Latin America and the Caribbean, as requested by the Governing Council in its decisions 10/25 A, 1O/25 B and 11/7, part three, are reported on in document UNEP/GC.12/12.

3. INFORMATION
(Budget subline 0303)

253. The year 1983 was one of transition and of reform and restructuring for the Information Service. A full report on measures taken in pursuance of Governing Council decision 11/7, part three, sections C and D is provided in document UNEP/GC.12/6.

(a) Publications

254. During the intensive exercise of seeking and assessing consultants' advice on how to improve the cost-effectiveness of UNEP publications, simultaneous and significant progress was made internally. On instructions from the UNEP Publications Board, the Information Service negotiated with the Government of France and CIFCA co-operative agreements for the provision of translation, technical editing and publishing

104 FP/0306-83-01.

105 FP/0306-80-01.

services in French and Spanish. The terms of the agreements are currently being reviewed by the Publications Board. Further progress in this area included the development of a joint publications and information support project with the Government of the USSR; the preparation of a similar project with the Government of China, which includes publication of a regular journal called *World Environment* in Chinese; and discussions with the Government of the Federal Republic of Germany on the dissemination of selected UNEP information materials in German.

255. In the areas of production, printing and distribution, agreements have been negotiated with the UN Publishing Division for printing and mailing at the United Nations Office at Geneva, commercial distribution through the network of UN sales outlets in 73 countries, and negotiation of commercial publishing agreements by the External Publications Officer in New York on behalf of UNEP, on request.

256. Most of the initiatives taken by the Publications Board and the Information Service were endorsed in the reports of two consultants specifically assigned to study the cost-effectiveness of publications, in pursuance of Council decision 11/7. Included in the exercise was an in-depth analysis of the *Mazingira* project,[106] which strengthened the justification for the Executive Director's decision to change the nature of UNEP support for the journal from full sponsorship to a declining subsidy. Henceforth, *Mazingira* will be published six times a year, in three language editions, in a new format and with much broader editorial content. In late 1983, a one-year contract for what is hoped will be a regeneration of *Mazingira* was awarded, with further UNEP support dependent on the outcome of a project performance evaluation in September 1984. The first of a projected series of subregional or additional language versions of *Mazingira* was produced in 1983 for India, with the active support of the Prime Minister.

257. With the assistance of the Norwegian Government, a distinctive graphic style for UNEP publications has been devised. The new design style is intended to ensure the immediate recognition of the publications output of UNEP, with the objective of more effective communication.

(b) Regional information activities

258. To provide information material on a continuous basis to media outlets in the regions, joint activities were launched in 1983 with the Press Foundation of Asia, Inter-Press Service (for Latin America and the Caribbean), the All Africa Press Service and the Dakar-based Environment and Development in the Third World organization. The project with the IIED Earthscan feature service was extended to cover 1983.

259. Over 350 news and feature articles were issued, backed up by media packs and press briefing documents on such issues as genetic resources, forestry and oceans. Efforts were also made to distribute the articles in the major regional languages. The feedback available to UNEP indicates that good use was made of the articles in the media.

106 FP/0303-76-02.

260. World Environment Day was widely celebrated in 1983. While the UNEP regional offices played a major role in producing and distributing media material, the event was also highlighted through activities organized by national focal points and citizens' action groups. Australia, Kenya, Mexico and Sri Lanka have even established a World Environment Week. World Environment Day provides a fine illustration of the catalytic role of UNEP in information activities: the celebrations, orchestrated at first by the organization, are now increasingly being organized independently by governmental and non-governmental organizations.

261. Another important regional information activity during the year under review involved sensitizing media personnel in the regions to environmental issues. Examples in 1983 were a media workshop for 14 journalists from Asia and the Pacific, held in collaboration with the Press Foundation of Asia; a National Workshop on Environmental Awareness, organized in collaboration with the Supreme Council for Sciences in Syria; and a press briefing organized through Earthscan in connection with the launching of the Caribbean Action Plan.

(c) Co-operation with NGOs

262. The most significant UNEP-NGO encounter in 1983 was a meeting in Geneva in January to which seven major NGO representatives were invited by the Executive Director to discuss UNEP-NGO working relations.

263. UNEP liaised closely with ELC [107] in updating the UNEP mailing list of 1,700 NGOs, which is based on the ELC list of 7,000 NGOs. Some 300 major NGOs were selected from the 1,700 and notified of the convening of the eleventh session of the Governing Council; 42 sent observers to the session. Apart from the daily briefings for NGOs during the session, special meetings were arranged with senior UNEP staff.

264. World Environment Day activities were organized in most countries by NGO groups. An Environment Awareness Week arranged by Kenyan NGOs, which centred round exhibits and film shows, lectures, street processions and radio and television programmes, was a typical example.

(d) Audio-visual materials

265. Two films were produced by UNEP in co-operation with the BBC.[108] *The State of the Planet* was based on the Public Hearing on the state of the environment held in London in June 1982. *A Killing Rain* deals with acid rain problems in Europe. Both films have been shown by the BBC and other television stations. Non-theatrical use has been made of *A Killing Rain* in Canada and the United Kingdom. French and Spanish versions are already in circulation, and an Arabic version is being prepared.

266. To highlight World Environment Day 1983, UNEP produced and distributed, in

107 Under project FP/0303-83-01.

108 Under project FP/0303-82-07.

collaboration with Jamaica Television and Visnews, a special television newsclip and a 20-minute television news magazine item featuring the Prime Minister of Jamaica and the Executive Director of UNEP.

267. Another important audio-visual activity in 1983 concerned the desertification information campaign, which is intended to give media support to the general assessment of progress in the implementation of the Plan of Action to Combat Desertification (see paragraphs 98 and 99 above). Production of the first of a series of films on desertification started in September 1983 in Ethiopia. Photo missions were completed in eight countries in Africa, Asia (including China and the USSR) and south America. Further, Radio Link-Up Services, an organization engaged in providing broadcasting material to third world countries, began preparation of a half-hour radio programme based on interviews and actual facts from the field. BBC radio was also preparing a 30-60-minute documentary to be broadcast on its domestic and overseas services.

268. Other audio-visual activities included global distribution of such UNEP-assisted productions as *The Fragile Mountain* and *Pills and Pesticides: For Export Only*. The latter film is being dubbed in Spanish for wider use in Latin America.

(e) Media liaison

269. A regular media service was maintained through press and information releases with the aim of providing the international press corps with background material on important environmental issues prior to meetings and conferences dealing with the issues. Background press briefings were initiated with UNEP experts, who provided the press corps with a full picture of each issue and the role of UNEP in dealing with it. It is intended that this kind of communication with the press will be continuously increased to make the role of UNEP more visible.

270. In decision 10/11, the Governing Council requested the Executive Director to maintain and increase contacts with artists from a wide range of countries with a view to creating a permanent exhibition from the paintings and other works of art displayed on the occasion of the session of a special character. During 1983, UNEP sought the advice of several experts in connection with the installation of such an exhibition at the new permanent headquarters in Nairobi. On the basis of proposals made by those experts, a number of activities are now in the planning stage, including the writing of an informative brochure for governments and interested organizations.

Chapter V

THE ENVIRONMENT FUND

1. This chapter is concerned principally with the use of the resources available to the Environment Fund in 1983 but it also describes the management in 1983 of trust funds established under the rules of the Environment Fund, counterpart contributions provided to UNEP under the rules of the Fund, and the Revolving Fund (Information).

2. The chapter should be read in conjuction with the UNEP/FUND/PROJECTS/- series of documents published in *Report to Governments* which present descriptions of projects approved, revised and completed, using the format and criteria established by the Governing Council in its decision 96(V). A full list of projects approved in 1983 was published in *Report to Governments* No. 47 (January 1984) and a full list of on-going regional and sub-regional projects was published in *Report to Governments* No. 48 (March 1984).

RESOURCES AVAILABLE 1983[1]

3. A final statement of the resources available to the Environment Fund in 1983 will

1 Figures in the text of this chapter are normally rounded and as a result, they may appear not to tally with the totals shown. Such minor deviations are common to normal rounding practices.

not be available before the accounts for the biennium 1982-1983 are finalized in March 1984, but estimated figures at 31 December 1983 are as follows:

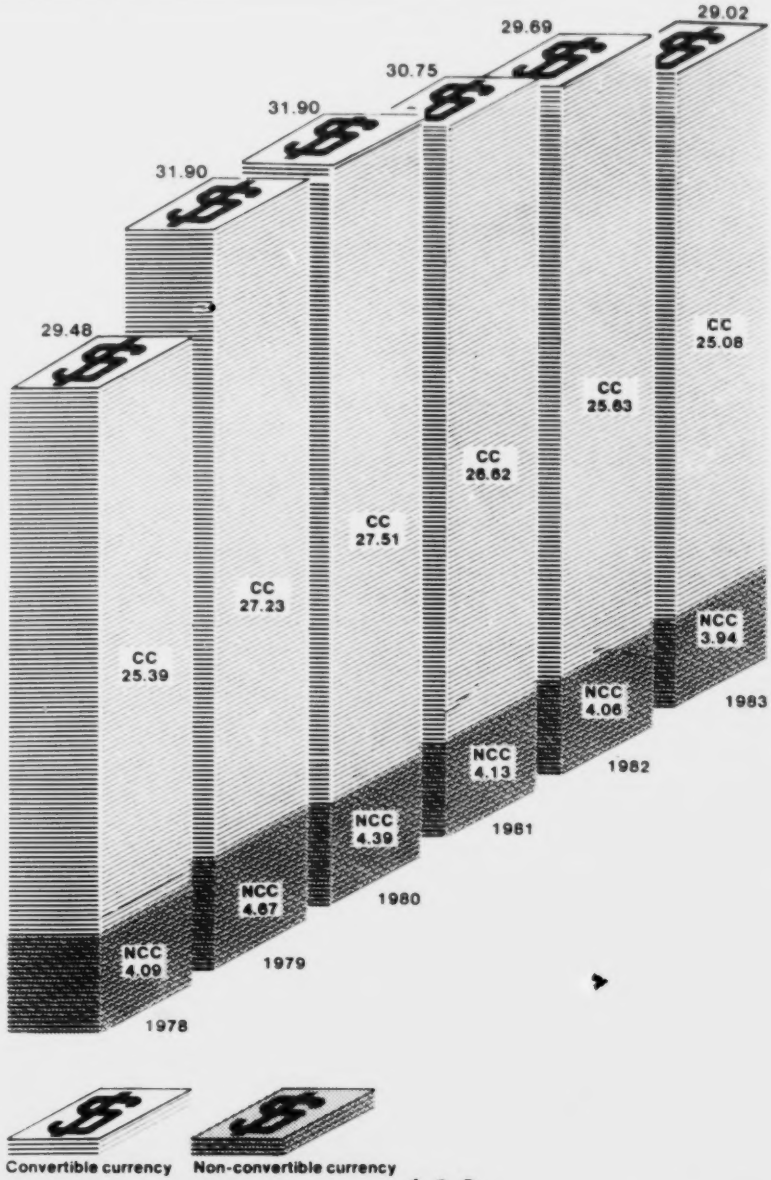
	(Millions of dollars)		
	CC[a]	NCC[b]	Total
Balance of Fund carried forward from 1982 (including unpaid pledges 1978-1982)	14.78	10.87	25.65
Contributions for 1983 paid by 31 December 1983	23.41	3.94	27.35
Contributions pledged for 1983 but not paid by 31 December 1983	1.67	–	1.67
Other income (after providing resources for change in financial reserve)	1.36	(0.78)	0.58
Total resources available	41.22	14.03	55.25

[a] Convertible currencies

[b] Non-convertible currencies

4. Total contributions paid or pledged to the Fund for 1983 amounted to $29.02 million, lower than in any year since 1977. This was a disappointing outcome after the indications of support to UNEP given at the session of a special character in 1982.

Figure I. Contributions in convertible (CC) and non-convertible currency (NCC), 1978-1983[a] (Millions of dollars)



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a Including outstanding unpaid contributions as at 31 December 1983 as set out in para. 9 below, estimated in accordance with the general procedures governing the operations of the Fund.

5. The reduction in contributions in 1983 compared with 1982 resulted from changes in the pattern of contributions which may be tabulated as follows:

	No. of countries 1982	Total contributions (Thousands of dollars)	Change compared with 1981
Countries contributing			
For the first time in 1983	3	12	12
Paid in 1983 and earlier years but not 1982	3	37	37
Higher rate in US dollars	11	971	89
Higher rate in local currency	7	3 253	445
Same rate in US dollars	34	8 733	–
Same rate in local currency	15	3 098	(88)
Lower rate in US dollars	14	9 329	(243)
Lower rate in local currency	2	3 582	(96)
Nothing in 1983, although paid in 1982	(2)	–	(792)
Nothing in 1983, and 1982 pledges not paid	(1)	–	(8)
	89	29 015	(644)

6. The total of 89 countries that pledged or paid contributions to the Fund in 1983 can be compared with 87 that contributed or pledged to contribute in 1982.

7. The three countries pledging contributions to the Fund for the first time were Ecuador, Swaziland and Zimbabwe.

8. There was no further deterioration in the timeliness of payment of contributions in the first half of 1983, but $1.67 million of pledged contributions had not been paid by 31 December, a situation worse than in any year since 1980. The pattern of payments in

recent years was as follows:

Contributions paid 1979-1983 (Cumulative) as at 31 December 1983
(Millions of dollars)

	1979	1980	1981	1982	1983
Paid by 31 March	5.01	4.45	4.22	4.10	5.72
Paid by 30 June	16.13	17.80	14.91	16.26	15.91
Paid by 30 September	22.68	23.18	21.74	19.79	21.92
Paid by 31 December	30.41	25.89	29.56	28.79	27.35
Paid after 31 December	1.46	5.98	1.19	0.83	–
	31.87	31.87	30.75	29.62	27.35

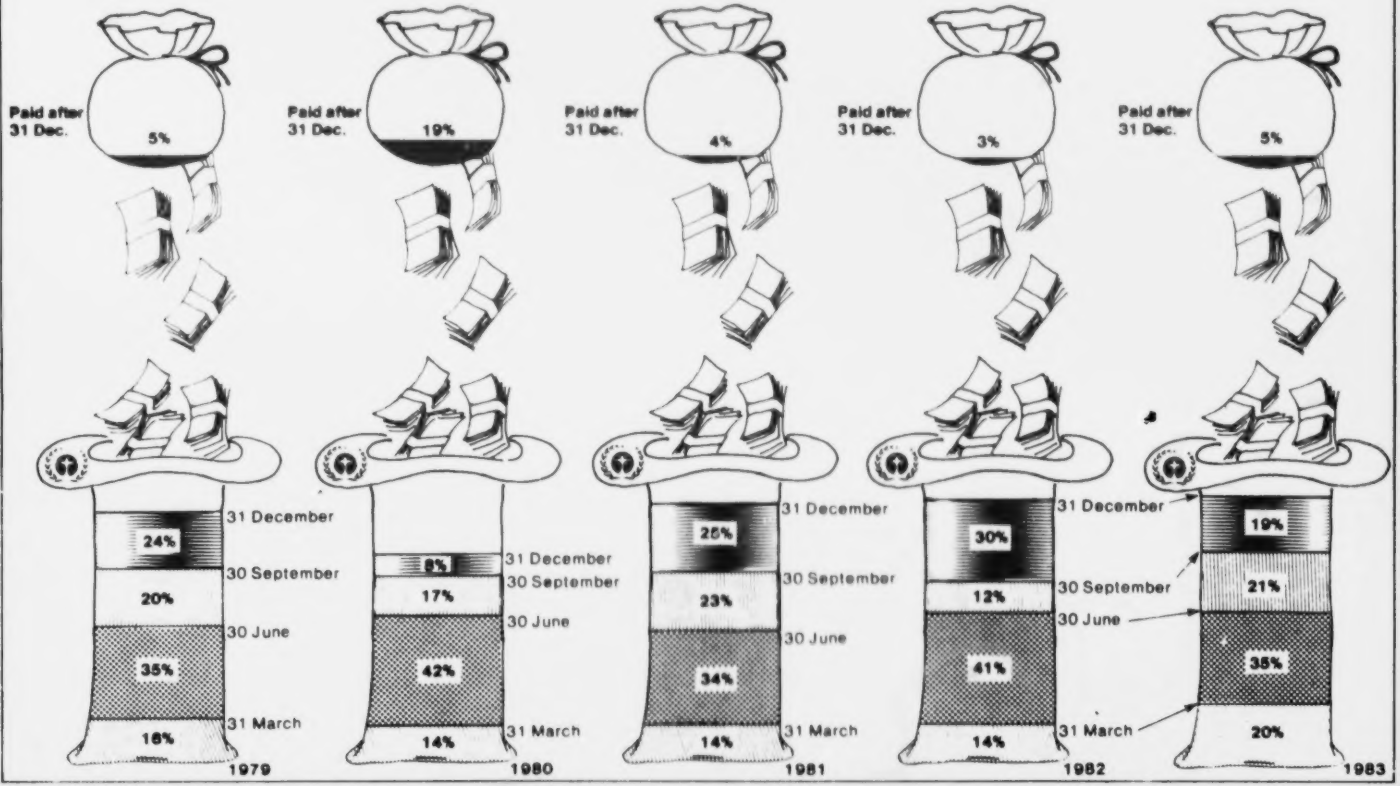
9. At the beginning of 1983, outstanding contributions totalling $1.41 million were recorded for the period 1978-1982. In accordance with Governing Council decision 11/10 paragraph 10, the Executive Director debited from the estimate resources contributions outstanding in respect of the period 1978-1981 for which no confirmation of intention to pay had been received, which resulted in a reduction of $0.3 million in that figure. Contributions outstanding for the period 1978-1983 as at 31 December 1983 were as follows:

Contributions for 1978-1983 outstanding at 31 December 1983

In respect of year	Number of countries with outstanding contributions still recorded	Total amount of contribution outstanding (Millions of dollars)
1978-1981	2	0.08
1982	11	0.07
1983	27	1.67
Total all outstanding contributions	31	1.82

A list of outstanding contributions is given in annex V, table 1.

Figure II. Percentages of contributions received per quarter, 1979-1983



USE OF RESOURCES

A. PROGRAMME AND PROGRAMME SUPPORT COSTS

10. By decision 11/12, section A, paragraph 4, the Governing Council approved a revised appropriation of $20.6 million for programme and programme support costs in 1982-1983. Expenditure in 1982 was $9.41 million which left $11.19 million of the appropriation available for 1983.

11. Estimates of expenditure on programme and programme support costs in 1983 in advance of the finalization of the 1982-1983 financial accounts (March 1984), indicate that the out-turn should be approximately $9.7 million, a level well inside the available appropriation.

12. Expenditure of $9.7 million will mean that programme and programme support costs accounted for 33.4 per cent of contributions paid or pledged for 1983, only slightly more than the guideline of 33 per cent of estimated contributions given to the Executive Director by the Governing Council in its decision 11/10, paragraph 14. At the time the Executive Director made the allocation for programme and programme support costs, contributions were estimated at a higher level than was actually realized. It should also be remembered that the Executive Director informed the Council at its eleventh session that he could not guarantee that he would be fully successful in containing expenditure within the limit of 33 per cent of contributions in 1983 if the latter did not increase above the then estimate of $30.15 million.[2]

13. It should also be noted that keeping programme and programme support costs to a total of $9.7 million was only achieved by making a great effort in controlling costs and by having approximately 25 per cent of approved posts unfilled in 1983. In a small organization such as UNEP, continuing to operate at less than 80 per cent of the approved staffing level will, as the Executive Director has already stated, [3] undermine the capacity of UNEP to deliver a broad-based, scientific, well-managed environment programme. In 1983, important programme disciplines were not represented on the UNEP staff.

B. FUND PROGRAMME ACTIVITIES—APPROPRIATION, APPORTIONMENT AND ALLOCATION [4] 1982-1983

14. The appropriation and apportionment of resources for Fund programme activities for 1982-1983 were reconfirmed by the Governing Council in its decision 10/27, paragraphs 17-19. At the Governing Council's eleventh session the Executive Director reported that he had allocated $65 million (including $1 million for the Fund programme reserve) out of the appropriation of $95 million on the basis of his estimate of available resources, and that, apart from two specified exceptions, he had determined the alloca-

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2 UNEP/GC.11/12/Add.2, para. 4.

3 UNEP/GC.11/12, para. 7.

4 Definitions of these and other terms used in documents relating to the Environment Fund are given at the end of chap. V.

tion to individual budget lines strictly in accordance with the percentages established by the Governing Council at its ninth session.[5]

15. The Executive Director made no further changes in 1983 in the allocations for 1¢93-1983. One apportionment of the appropriation f 1¢82-1983 by budget line as approved by the Governing Council in its decision 9/23, paragraph 14, compared with the allocations to budget lines made by the Executive Director, is set out in table 2 in annex V to this report.

16. The allocation of $65 million from the appropriation for 1982-1983 was made on a biennium basis and was originally divided between the two years, with $37.5 million for 1982 and $27.5 million for 1983 (including $0.5 million in each year for the Fund programme reserve). However, the amount of the total 1982 allocation used in 1982, as represented by recorded expenditure on projects, was only $22.15 million, leaving a balance of $15.35 million, which was added to the $27.5 million allocation for 1983, giving a revised total of $42.85 million for the second year of the biennium. Appropriate adjustments were then made for each budget line separately, and the adjusted figures for 1983 allocation availability are given by budget line in annex V, table 3.

17. Of the revised total of $42.85 million available for Fund programme and Fund programme reserve activities for 1983, $32.56 million, or 76 per cent, was committed. There was thus an undercommitment of $10.29 million. The reasons for this were twofold. First, as the Executive Director suggested might happen,[6] delays in the receipt of firm pledges of contributions for 1984-1985 during the second half of 1983 forced the Executive Director to slow down the 1983 programme to ensure that resources would be available for a minimum programme in 1984. In fact, at the end of October 1983, confirmed pledges of contributions amounted to only $1.36 million, and while that amount had risen to $6.24 million by the end of November, the total of contributions pledged for 1984 had only reached $17.94 million by the end of December 1983. The convertible currency programme in 1983 was undercommitted by $6.2 million largely because of the uncertainty surrounding the availability of resources for 1984 and the consequential need to retain a higher level of funds than planned to meet commitments, including those for programme and programme support costs, in 1984. Secondly, the restructuring of NCC projects in 1983 meant, as the Executive Director had suggested it might,[7] that new NCC commitments were incurred at a slower rate than provided for. The equivalent of $4.09 million was undercommitted in relation to the programme for non-convertible currency projects submitted to the Governing Council at its eleventh session.[8]

18. Details of new project commitments incurred for 1983 by budget line are given in annex V, table 4.

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5 Annual Report of the Executive Director 1982, chap. V, para. 20.

6 UNEP/GC.11/12, para. 6.

7 *Ibid.*

8 UNEP/GC.11/12/Add.2 para. 3.

19. The projects approved (including project extensions) during 1983 increased the level of commitments during 1983 by $10.73 million and added $8.9 million to project commitments for future years. Overall, project commitments totalling $19.73 million were approved during 1983 (excluding the cancellation of commitments and rephasing of unspent committed resources from 1982), much less than the previous years' total of $34.06 million. The uncertainty surrounding the level of resources available for 1984 meant that the Executive Director was unable to return to a situation in which project activities were planned and committed in full, rather than planned and implemented in a series of separate phases. The following table shows the total increase in commitments for Fund activities in 1983. Further details are given in annex V, table 5.

Total allocations and project commitments 1982-1987
(Millions of dollars)

	Allocations	Commitments approved before 1982	Commitments approved in 1982	Total commitments 31 December 1982
1982	22.15	29.28	(7.13)[a]	22.15
1983	42.85	21.83	10.73	32.56
Total 1982-1983	65.00	51.11	3.60	54.71
1984	28.50	7.40	6.33	13.73
1985	22.50	2.65	2.44	5.10
Total 1984-1985	51.00	10.05	8.77	18.83
1986-1987	16.00	–	0.22	0.22
Total all years	132.00	61.16	12.60	73.76

[a] Amount of 1982 commitments rephased to 1983 or later years (or cancelled) after equalization of 1982 project commitments with 1982 project expenditures

20. Details of total commitments (CC and NCC) incurred for 1983 by budget line are set out in annex V, table 6.

D. NON-CONVERTIBLE CURRENCY PROGRAMME

21. Project commitments in non-convertible currencies totalling the equivalent of $2.35 million were approved in 1983, excluding the cancellation or rephasing of commitments unused in 1982. These new commitments related to the years 1983-1987 and were distributed as shown below.

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22. The total of project commitments in non-convertible currencies was lower in 1983 ($5.73 million) than in 1982 ($6.30 million) (before the adjustment of the level of com-

Non-convertible currency commitments 1982-1987
(Millions of dollars)

	Commitments approved before 1983	Commitments approved in 1983	Total commitments 31 December 1983
1982	6.30	(1.58)*	4.72
1983	4.55	1.18	5.73
Total 1982-1983	10.85	(0.40)	10.45
1984	1.32	1.80	3.12
1985	0.26	0.95	1.21
Total 1984-1985	1.58	2.75	4.33
1986-1987	–	–	–
Total all years	12.43	2.35	14.78

* See note under previous table.

mitments to the level of expenditures) and almost certainly recorded expenditure in these currencies will also be lower in 1983 (perhaps $4.07 million) than in 1982 ($4.72 million). This was partly because a number of these currencies were to all intents and purposes fully used and, with respect to others, partly because discussions continued on the restructuring of the programmes in the light of the Governing Council's decision 10/27, paragraph 9. However, the most important factor inhibiting the incurring of new commitments in non-convertible currencies in 1983 was the uncertainty surrounding the level of convertible currency resources in 1984 and the request to the Executive Director to allocate available resources to the different budget lines in 1984-1985 so far as possible in proportion to the approved apportionment.[9]

23. However, seven new non-convertible currency projects were approved in 1983 compared with five in 1982, and a further three newly approved projects contained NCC components. In all there were 36 active NCC projects in 1983 and a further 22 projects with NCC components.

24. Details of NCC commitments by budget line are set out in annex V, table 6.

25. The amount of non-convertible currencies used in 1983 continued to exceed the amount of new contributions made in them. New contributions totalled the equivalent of $3.94 million while the amount of NCCs used (including programme and programme

9 Governing Council decision 11/10, para. 17.

support costs) is expected to be approximately $4.5 million. As indicated above, some holdings of NCCs have been effectively used up and a number of present holdings are insufficient to finance new activities. Bank balances in these currencies declined from the equivalent of $9.81 million at the end of 1982 to $7.80 million at the end of 1983, as shown by the table below:

Bank balances in non-convertible currencies

(US dollar equivalent)

	31 December 1982	31 December 1983
Bulgarian leva	4	741
Byelorussian SSR roubles[a]	5 082	1 977
Chinese yuan	177 505	215 614
Cuban pesos	47 847	31 782
Czechoslovakian korunas	503	29 066
German Democratic Rep. marks	95 825	134 233
Hungarian forints	12 371	5 891
Polish zlotys	19 161	34 821
Romanian lei	44 530	44 530
Ukrainian SSR roubles[a]	8 417	2 754
USSR roubles[a]	6 748 274	5 327 187
Yugoslavian dinars	71 479	46 741
Convertible roubles[b]	2 576 545	1 923 592
	9 807 543	7 798 929

a Roubles which are wholly non-convertible.

b Roubles which can be converted into dollars in prescribed circumstances.

NCC balances have now been reduced from the peak level of $16.79 million in December 1979 to $7.80 million at the end of 1983.

E. INSTITUTIONS IMPLEMENTING UNEP PROJECTS

26. Details of agencies responsible for implementing Fund projects in 1982 and 1983 are set out in annex V, table 7. Long-term trends can be seen from annex V, table 8.

27. The share of co-operating agencies (the UN system) in the implementation of Fund projects seems to have stabilized at around one third of the activities, while the supporting organizations cover about 25 per cent. Another 25 per cent of activities are in the form of internal projects, the rest being represented by the programme activity centres.

28. Commitments with FAO in particular rose sharply from $0.88 million in 1982 to $2.79 million in 1983 as new activities were approved or implemented at a higher level in connection with pest control in African cotton, directories of marine science, preparing the global plan of action for marine mammals, monitoring of marine pollution in West and Central Africa, conservation of forest genetic resources, conservation of animal genetic resources, desertification assessment and mapping, and nitrogen fixation in the soil.

29. Similarly, activities with UNESCO were costed at $2.67 million in 1983 compared with $1.82 million in 1982, with approval of new activities in connection with control of coastal erosion in West and Central Africa, ecological training and management of tropical forests, support to the international conference on biosphere reserves and the establishment of biosphere reserves.

30. Activities got under way with UNDIESA in connection with the major regional aquifer in North East Africa, whereas activities with UNICEF in connection with the integrated water supply project in Swaziland came to an end.

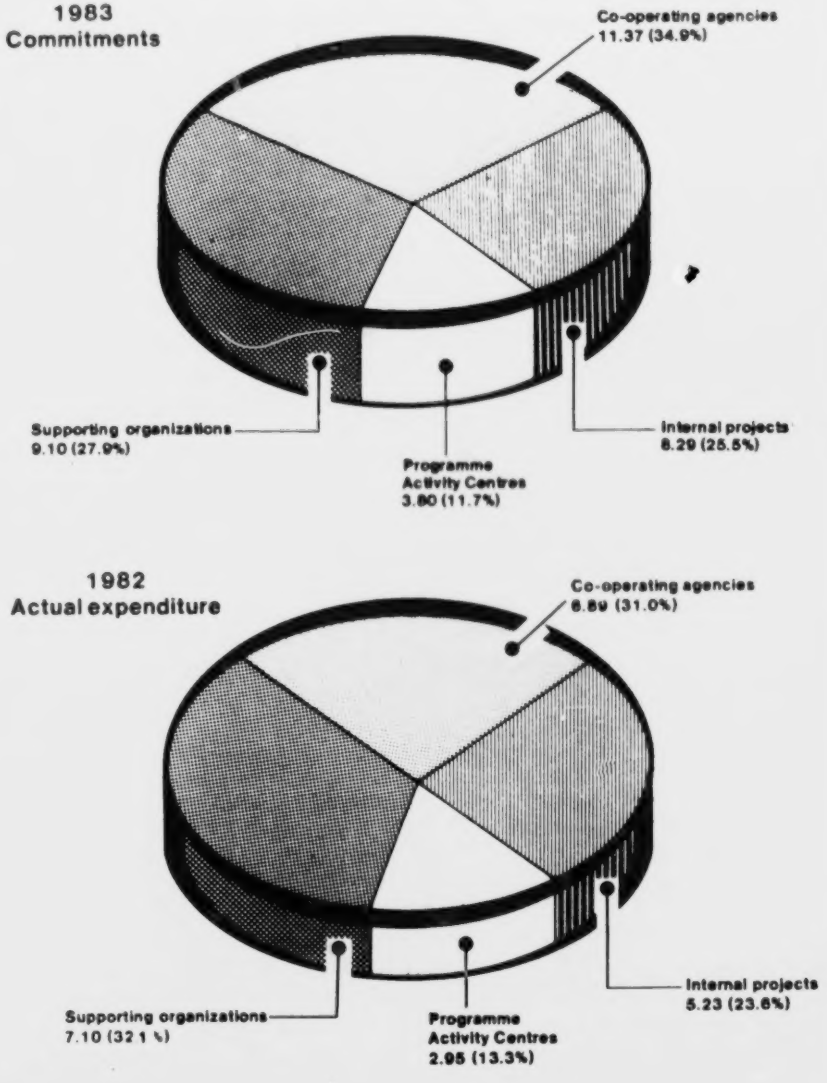
31. A new project was approved with SCOPE relating to atmospheric carbon dioxide, while increased impetus was built up in activities approved earlier in connection with the carbon cycle, the sulphur cycle and the dynamics of fresh water ecosystems. A new project was approved with King's College, London, for studies in photosynthesis, while increased support was given to the South Pacific Commission and the Comisión Permanente del Pacífico Sur in connection with the regional environment programme for the South Pacific and the development of an action plan for the South East Pacific respectively.

F. GEOGRAPHICAL DISTRIBUTION OF COMMITMENTS

32. A geographical analysis of Fund commitments, based on the criterion of who benefits primarily, is given in annex V, table 9. During 1983, a re-examination of the geographical coding of Fund projects was undertaken and the regional classification changed to bring it into line with the regions of the United Nations.[10] Thus, whereas in previous years projects of the Mediterranean Action Plan were classified as "Europe and Mediterranean", they are now classified "inter-regional", since they extend across the European, West Asian and African regions. Projects now classified as Europe relate to the European region alone. At the same time, projects previously classified within the group "the Americas" have been divided between "Latin America and the Caribbean" on the one hand, and "North America" on the other. Projects which extended across

10 Africa, Asia, Latin America, North America, Europe.

Figure III. Distribution of commitments by institution implementing Fund projects, 1982 and 1983 (Millions of dollars and percentages)



both Latin America and North America would be classified as "interregional". The new analysis has been undertaken retroactively starting in 1979 and it is these figures that are set out in annex V, table 9. Table 9 shows a reasonable balance between activities geared towards global problems and those addressing regional or interregional issues and activities destined to serve each of the three developing continents.

G. THE NUMBER OF FUND PROJECTS APPROVED

33. Forty-four new projects were approved by the Fund in 1983, compared with 70 in 1982. During 1983, 37 projects were closed and at the end of the year there was a total of 299 projects still open. Changes in the number of Fund projects since 1973 are given below:

Number of projects financed by the Fund

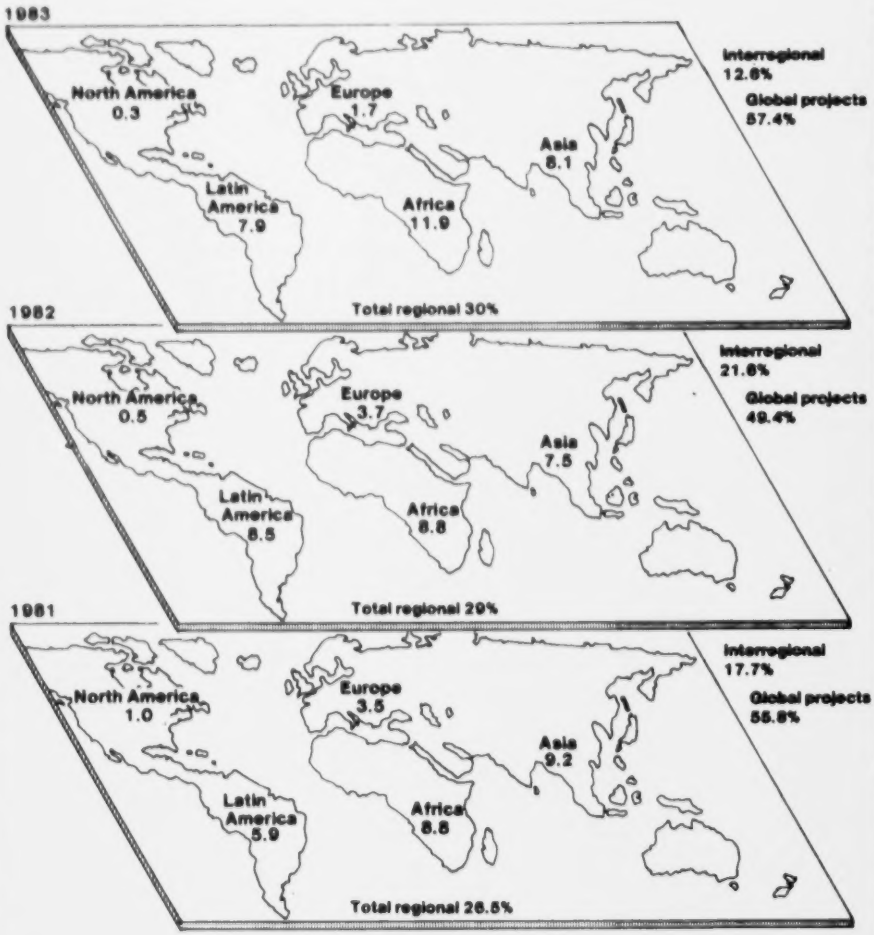
	Projects[a] approved during the year	Projects closed during the year	Projects[b] active during the year	Projects[c] open at end of the year
1972-1973	68	–	26	68
1974	126	2	172	192
1975	131	3	249	320
1976	83	88	299	315
1977	73	117	287	217
1978	84	63	287	292
1979	58	99	313	251
1980	64	43	258	272
1981	40	49	261	263
1982	70	41	273	292
1983	44	37	277	299

[a] Defined as projects signed on behalf of the Fund.

[b] Defined for this purpose as projects for which a commitment was included on the books of the Fund in the year shown.

[c] Defined as active projects and projects completed but not formally closed.

Figure IV. Share of total project commitments, by region
(Percentages)



A list of the 44 new projects is included in *Report to Governments* No. 47 (January 1984).

H. FUND PROGRAMME RESERVE

34. As with Fund programme budget lines, the unused portion of the 1982 allocation for the Fund programme reserve was carried forward from 1982 to 1983 and this together with the original allocation for 1983 of $0.50 million made available for the programme reserve a total of $0.73 million. Commitments totalling $0.56 million were charged against that available allocation in 1983 representing a total of five projects. Three of those projects all concerning implementation of decisions of the Governing Council were reported in the Annual Report of the Executive Director 1982. The other two also related to decisions of the Governing Council and concerned the environment and military activity and initial support to the World Industry Conference on Environmental Management.

I. THE BALANCE OF FUND INCOME AND EXPENDITURE 1983

35. Details of income and expenditure of the Fund in 1983 are not available at the time of preparation of this report and will only be available just before the twelfth session of the Governing Council. Present estimates (at 31 December 1983) of expenditure on programme and programme support costs amounting to $9.7 million and of project expenditure amounting to $25.5 million indicate total expenditure of approximately $35.2 million, compared with Fund income of approximately $30 million, but these estimates must be considered as tentative at this stage. As in 1979-1981 (but not 1982), any deficit between income and expenditure will be financed by a reduction in the balance of the Fund.

J. TRUST FUNDS AND OTHER FUNDS

36. At its eleventh session the Governing Council approved the extension until 31 December 1985 of a number of trust funds established under the rules of the Environment Fund,[11] and their extension was subsequently formally authorized by the Secretary-General of the United Nations.

37. Details of the income and expenditure of each of the trust funds established under the rules of the Environment Fund, and of the Special Account for financing the implementation of the Plan of Action to Combat Desertification will be given in the financial report and accounts of the Environment Fund for 1982-1983.[12] Developments with respect to each of these and other funds since the Executive Director last reported to the Governing Council [13] are described below.

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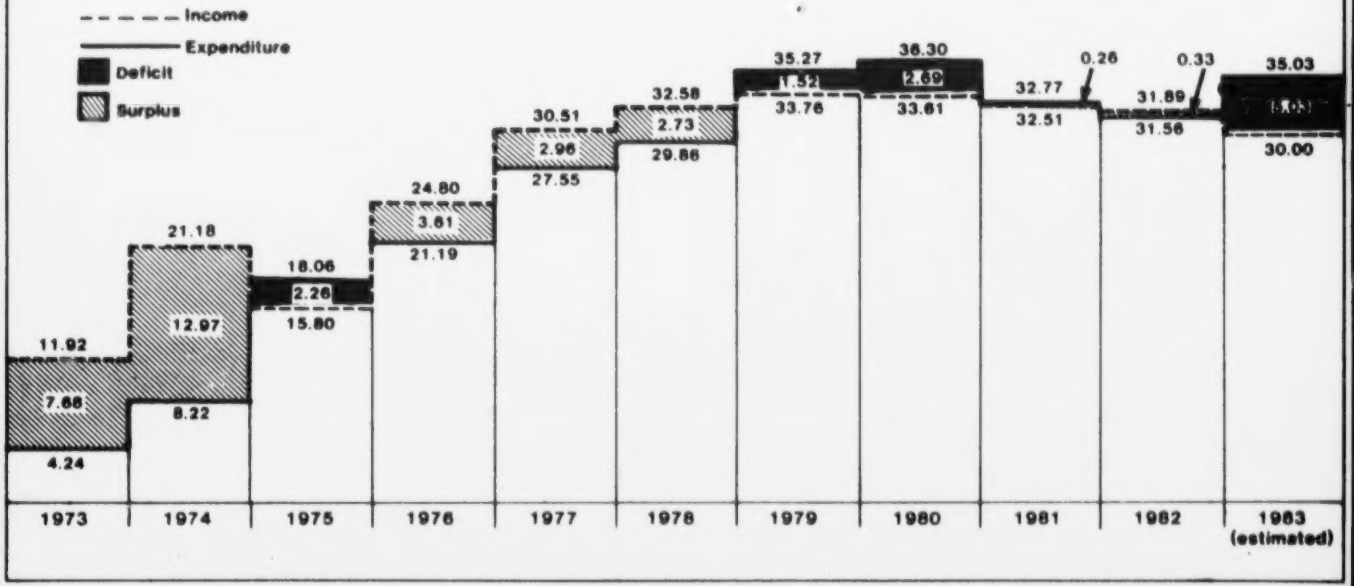
11 Governing Council decision 11/10, para. 24.

12 UNEP/GC.12/L.4.

13 UNEP/GC/11/13 and Add. 1.

Figure V. Balance of income and expenditure since the establishment of the Environment Fund (Millions of dollars)



1. *The Regional Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates*

38. No contributions were due to be paid or were paid into this Trust Fund in 1983. The balance of resources in the Trust Fund on 1 January 1983, $1,520,954, were used to finance United Nations activities in support of the Kuwait Action Plan, the main part of the Action Plan being financed directly by the parties to the Convention. Project commitments in 1983 charged to the balance of the Trust Fund totalled $867,848. Activities will continue in 1984 and 1985 within the available balance.

2. *The Trust Fund for the Protection of the Mediterranean Sea against Pollution*

39. Contributions of $2.23 million were received by the Trust Fund in 1983 from the parties to the Barcelona Convention. These together with the balance of $3.54 million carried forward from 1982 provided total resources of $5.77 million to finance activities in 1983 and later years. This meant that the earlier problem of inadequate resources to finance activities approved by the parties was largely overcome and it was possible for the first time to budget for activities for more than a few months ahead. Total project commitments in 1983 amounted to $2.88 million and commitments of $1.20 million were incurred for 1984. At the end of 1983, contributions totalling $558,822 were outstanding.

3. *The Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora*

40. Although delays in the payment of contributions by parties to the Convention continued to present some problems, contributions totalling $464,134 were paid in 1983, which, together with a balance of $261,528 carried forward from 1982, provided total resources of $725,662 which was sufficient to finance the activities of the Convention secretariat in 1983 and through to April 1984. Thus, as at 31 December 1983, funds were not available to finance the secretariat budget through 1984, and unless contributions are received in a more timely fashion, it will continue to be financed forward a few months at a time. At the end of 1983, contributions totalling $318,283 were outstanding, which had they been paid, would have provided the secretariat with a full budget for 1984.

4. *The Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region*

41. Contributions to this Trust Fund since its establishment had reached a total of only $56,303 by 31 December 1983, which was still insufficient to enable the Fund to become operational, its terms of reference requiring that a minimum of $250,000 be contributed. At the end of 1983, contributions of $2,350,947 were outstanding.

5. *The Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme*

42. Contributions of $704,328 were paid to this Trust Fund in 1983 which, together

with the balance of $126,968 brought forward from 1982, was sufficient to enable it to become operational and to incur commitments for the first time. Project commitments of $75,000 were incurred for 1983 and of $74,600 for 1984. A programme for committing the remaining funds has been agreed with the parties. At the end of 1983, contributions to the Trust Fund totalling $469,688 were still outstanding.

6. *The Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas*

43. Contributions of $67,000 were paid to this Trust Fund in 1983 which, together with the balance of $91,858 brought forward from 1982, provided a total of $158,858 to finance activities. A total of $99,500 was committed for 1983. A single contribution of $19,000 was outstanding on 31 December 1983.

7. *Trust Fund for Regional Training Workshop on Environmental Management*

44. Resources totalling $215,558 were carried forward to 1983 from the previous year. As already reported to the Governing Council [14] the final workshop was held in Rome in March 1983. The UNEP Environmental Consultative Committee on the Pulp and Paper Industry met in Quebec, Canada, in June 1983 to evaluate the results achieved by the programme, which is now being brought to a close.

8. *Special purpose trust funds for the provision of junior professional officers*

45. Under the agreement with the Danish International Development Agency, one junior professional officer started work on 6 April 1983. Another junior professional officer was appointed on 18 August 1983 under the agreement with the Federal Republic of Germany. The arrangements with the Government of Norway have been successfully concluded, but no appointment of a junior professional officer was made during 1983. A similar agreement with the Socialist People's Libyan Arab Jamahiriya has been signed, but pending the approval of the Secretary-General for administering the scheme, no appointments have been made. Discussions with the Government of Japan were initiated during 1983 with a view to concluding a junior professional officer's agreement under which all costs relating to the appointment of Japanese junior professional officers can be charged to a special purpose trust fund.

9. *Trust Fund for the Sasakawa Environment Prize*

46. Procedures for administering the Sasakawa Environment Prize were agreed in 1983 and the Japan Shipbuilding Industry Foundation contributed $1 million to the Trust Fund established to finance the prize. In October 1983, the Secretary-General of the United Nations announced the establishement of the Prize Selection Committee. Governments, intergovernmental organizations, United Nations bodies and individuals were invited to nominate candidates for the prize. Nominations have been received and the Selection Committee is to meet to consider them in April 1984, for the award to be made in May or June 1984.

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14 UNEP/GC.11/13/Add.1.

10. *Other Funds*

(a) *Special Account for financing the implementation of the Plan of Action to Combat Desertification*

47. Two contributions totalling $93,362 were received in the Special Account in 1983, bringing the total contributed to the Account since its inception to $136,886. Of that total, $88,362 was provided for one specific project. None of the money in the Trust Fund had been committed for projects up to 31 December 1983.

(b) *Interim Special Account for Environment Perspective Commission 2000*

48. In accordance with General Assembly resolution 38/161, paragraph 7, an interim special account in the form of a trust fund has been established by the Executive Director under the rules of the Environment Fund and the United Nations financial regulations. The Interim Special Account will be maintained by the Executive Director until the establishment of the Special Commission on the Environmental Perspective to the year 2000 and beyond. Custody of and responsibility for the account will be transferred by the Executive Director to the Commission when the latter has promulgated financial procedures governing custody and audit of the funds so transferred. No contributions had been paid into the Interim Special Account by 31 December 1983.

(c) *Revolving Fund (Information)*

49. No expenditures were charged to the Revolving Fund (Information) in 1983. Details of income accruing to the Revolving Fund in 1983 will be contained in the financial report and accounts of the Environment Fund, which will be available just before the Governing Council's twelfth session. It is, however, already clear that the balance of the Revolving Fund at the end of 1983 will exceed $100,000, and, it will not be necessary therefore for the Executive Director to allocate funds from the Fund programme reserve to bring the balance of the Revolving Fund to that sum in accordance with Governing Council decision 11/10, paragraph 22.

K. COUNTERPART CONTRIBUTIONS

50. The Executive Director has continued to seek resources additional to those provided by contributions to the Environment Fund in accordance with Governing Council decision 10/26, paragraph 4. Additional contributions totalling $2,880,147 were secured as counterpart contributions for eight projects in 1983 compared to a total of $4,831,098 secured for thirteen projects in 1982.

51. The largest contributor ($1,560,000 for four projects) was the Arab Gulf Programme for United Nations Development Organizations, while five Governments contributed a total of $1,320,147 for four projects. Details of all contributions are given in annex V, table 10.

DEFINITIONS

In this document and other documents relating to the Environment Fund, the following definitions are used:

Appropriation	The amount of resources voted by the Governing Council for specific purposes (for a financial period), against which the Executive Director is authorized to incur obligations and make payments for those purposes up to the amount so voted.
Apportionment	The division of the appropriation between different budget lines, as determined by the Governing Council.
Allocation	The assignment in writing of resources from the Fund by the Executive Director, for one or more specific purposes within the appropriation and apportionments determined by the Governing Council.
Commitment	An engagement entered into by the Executive Director, or under authority delegated by him, involving a liability against resources allocated within the appropriation and apportionments determined by the Governing Council.
Expenditure	Total charges incurred against a commitment, whether paid or unpaid.
Convertible Currency or CC	Currencies that can be exchanged and paid immediately into the bank account of the United Nations Environment Programme in New York.
Non-convertible Currency or NCC	Currencies that can be utilized solely or mainly within the territories of the respective donors and which cannot be exchanged and paid into bank accounts of UNEP, with the exception of convertible portions specifically authorized by the contributing countries.

Chapter VI

CENTRAL MANAGEMENT

1. As indicated in the 1982 Annual Report,[1] the secretariat of the United Nations Environment Programme is headed by an Executive Director who is elected by the General Assembly, on the nomination of the Secretary-General, for a four-year term. The Executive Director is assisted by a Deputy Executive Director and two Assistant Executive Directors, one in charge of the Office of the Environment Programme, the other in charge of the Office of the Environment Fund and Administration.

1. OFFICE OF THE EXECUTIVE DIRECTOR

2. The Office of the Executive Director, which includes the office of the Deputy Executive Director, is responsible for the overall management of UNEP. The Office exercises general supervision over UNEP's five regional offices: Africa—Nairobi; Asia—Bangkok; Europe—Geneva; Latin America and the Caribbean—Mexico City; and Western Asia—temporarily Bahrain and the UNEP liaison office at UN Headquarters in New York. The Office of the Executive Director also includes a number of other units and services dealing with external relations, protocol, inter-agency affairs, information services, the clearing-house and the secretariat of the Governing Council.

Management Group

3. The Management Group, the highest-level policy-making body within the UNEP secretariat, is chaired by the Executive Director and consists of the Deputy Executive Director, the two Assistant Executive Directors, the Deputy Assistant Executive Director in the Office of the Environment Programme, and the Director for Special Assignments in the Office of the Executive Director. During the year under review, the Group met regularly to consider important matters concerning programme development, administration and personnel.

Management Committee

4. The Management Committee, which is in effect the expanded Management Group, met eight times during 1983 for one or two days, under the chairmanship of the Executive Director, or, in his absence, the Deputy Executive Director. The Committee discussed a wide range of programme, administrative and policy matters, including preparations for the twelfth session of the Governing Council, plans and preparations for the World Industry Conference on Environmental Management and the Inter-

1 UNEP/GC.11/2, chap. VII, para. 1.

Parliamentary Conference on the Environment, review of the implementation of the programme and of Governing Council decisions, and the status of the Environment Fund.

Other committees

5. As explained in the 1982 Annual Report,[2] a number of other statutory and non-statutory committees play a role in the management advisory system of UNEP. As part of the UN Secretariat, UNEP has the usual statutory administrative and personnel committees including an Appointment and Promotion Board, Committee and Panel, a Joint Disciplinary Committee, a Committee on Contracts, a Property Survey Board, a Committee on Contracts (Building), a Panel to Investigate Allegations of Discriminatory Treatment, a Staff Committee and a Joint Advisory Committee (composed of representatives of the staff and the administration), which reports to the Executive Director.

6. Several non-statutory committees have been established to provide advice and/or co-ordination in specific areas. They include the Project Screening Committee and the Travel Committee and the Travel Committee, the responsibilities of which were described in the 1982 Annual Report.[3]

7. During 1983, the UNEP Publications Board was reconstituted and, under the chairmanship of the Deputy Executive Director, met frequently to advise the Executive Director on the substantive, financial and administrative aspects of the UNEP publications programme and on broad strategies for the implementation of the UNEP information policy, bearing in mind the specific concerns of Governments as voiced at the tenth and eleventh sessions of the Governing Council. The Board attempted to introduce tighter controls on the review, preparation and production of publications. Special attention was given to contracts with commercial publishers, with the Board assuming responsibility for making advisory recommendations on each contract in consultation with the Chief of the Fund Programme Management Branch.

8. The Board also responded to the need, voiced by the Governing Council, to improve production of publications in languages other than English. Thus the Board considered a proposal for a co-operative project with the Government of France under which the French Ministry of the Environment might assist in improving the production of UNEP publications in French. The Board also studied the possibility that the Government of the Federal Republic of Germany might disseminate selected UNEP information materials in German.

9. The Board reviewed a set of draft agreements with the UN publishing services in Geneva and New York whereby UNEP could obtain substantial assistance in the areas of editing, translation, technical and art production, printing and mailing, and commercial distribution through the UN network of sales outlets.

2 *Ibid.*, para. 4.

3 *Ibid.*, para. 5.

10. In addition, in anticipation of the establishment of a joint UNEP/UNCHS (Habitat) commissary, the Executive Directors of UNEP and UNCHS (Habitat) established a joint Commissary Advisory Committee, consisting of representatives of the staff and administrations of the two organizations. The primary task of the Committee during the year under review was to study the physical and financial requirements for the establishment of such a commissary at headquarters in Gigiri. The Committee reports jointly to the two Executive Directors.

11. The informal meetings of the Executive Director with the Nairobi-based permanent representatives to UNEP were institutionalized during 1983 in keeping with Governing Council decision 11/2. The recent series of meetings have not only provided an excellent opportunity to keep the Permanent Representatives informed concerning matters of interest to UNEP, but have also served as an invaluable sounding-board enabling the permanent representatives to make their views known to the Executive Director on matters of interest to them. Among the many subjects discussed were some of direct importance for the twelfth session of the Governing Council: preparation of the Executive Director's reports on environment in the dialogue between and among developed and developing countries, and on the general assessment of progress in the implementation of the Plan of Action to Combat Desertification;[4] reform of the information services; and progress in the preparations for the World Industry Conference on Environmental Management and the Inter-Parliamentary Conference on the Environment.

2. OFFICE OF THE ENVIRONMENT PROGRAMME

12. The principal advisory committee on programme matters is the Programme Co-ordinating Committee, the major functions of which were described in the 1982 Annual Report.[5]

13. An additional function assigned to the Committee in 1983 was the review of the reports and recommendations of the seven working groups established by the Executive Director in February 1983 with a view to furthering the development and co-ordination of the programme. The working groups cover fresh water and oceans; Earthwatch and health; terrestrial ecosystems and natural disasters; environment and development; human settlements, energy, industry and technology; support activities, peace and security; and regional support and technical assistance. The working groups, which met on average once a month in 1983, take the form of small technical seminars in which the participants focus on the scientific and technical aspects of each topic. Another of their tasks is to devise ways in which the programme can be further developed in each area, and to review the implementation of the programme in that area with the aim of identifying and removing any bottle-necks and duplication of effort. A senior staff member chairs each of the working groups, whose members are substantive officers with responsibilities or competence closely related to the subject-matter of the group. At the discretion of the chairman, other staff members or consultants may be invited to make presentations or give advice on specialized subjects.

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4 These reports are being submitted to the Council in documents UNEP/GC.12/11 and UNEP/GC.12/9 respectively.

5 *Op. cit.*, chap. VII, para. 8.

3. OFFICE OF THE ENVIRONMENT FUND AND ADMINISTRATION

14. During 1983, the Fund and Administration Co-ordination Committee described in the 1982 Annual Report[6] was abolished and replaced by a new Committee on Administrative Questions. This Committee is chaired by the Assistant Executive Director in the Office of the Environment Fund and Administration, and its members include the chiefs of the various branches and services within the Office as well as representatives from the Office of the Executive Director and the Office of the Programme. It meets on average once every six weeks, but may meet more frequently when the need arises. The main functions of the Committee are: to deal with administrative questions pertaining to the functioning of UNEP in general; to facilitate and promote the flow of information to and from the management of UNEP; to deal with administrative questions pertaining to relations with the host Government; and to look into staff-management relations.

6 *Ibid.*, para. 10.

ANNEX

Annex I

MEMBER STATES OF THE UNEP GOVERNING COUNCIL

A. *Member States during 1983*

Afghanistan
Argentina
Australia
Botswana
Brazil
Burundi
Byelorussian SSR
Cameroon
Canada
Chile
China
Colombia
Egypt
Finland
France
Germany, Federal Republic of
Ghana
Greece
Guinea
Haiti
Hungary
Iceland
India
Indonesia
Italy
Ivory Coast
Jamaica
Japan
Kenya
Lesotho
Libyan Arab Jamahiriya
Malaysia
Mexico
Morocco
Netherlands
Nigeria
Oman
Pakistan
Papua New Guinea
Peru
Philippines
Poland
Saudi Arabia
Senegal
Spain
Sri Lanka
Switzerland
Thailand
Uganda
Ukrainian SSR
USSR
United Kingdom
United Republic of Tanzania
United States
Uruguay
Venezuela
Yugoslavia
Zaire

B. *Member States during 1984*

Afghanistan
Algeria
Argentina
Australia
Austria
Belgium
Botswana
Brazil
Burundi
Byelorussian SSR
Cameroon
Canada
Chile
China
Colombia
Finland
France
Germany, Federal Republic of
Greece
Guinea
Haiti
Hungary
India
Indonesia
Italy
Ivory Coast
Jamaica
Japan
Kuwait
Lesotho
Malaysia
Mexico
Morocco
Nepal
Nigeria
Norway
Oman
Papua New Guinea
Peru
Philippines
Poland
Rwanda
Saudi Arabia
Senegal
Spain
Sudan
Thailand
Togo
Uganda
Ukrainian SSR
USSR
United Kingdom
United Republic of Tanzania
United States
Uruguay
Venezuela
Yugoslavia
Zaire

Annex II

DISTRIBUTION OF UNEP STAFF IN THE PROFESSIONAL CATEGORY AND ABOVE BY NATIONALITY AS AT 31 DECEMBER 1983[a]

	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
African States					
Algeria	–	–	1 P-1	1	1
Egypt	1 USG, 1 P-5	2	1 P-3	1	3
Ethiopia	1 P-5	1	1 P-5	1	2
Ghana	–	–	1 D-1	1	1
Kenya	1 D-2	1	1 P-5, 1 P-4, 3 P-3, 2 P-2	7	8
Libyan Arab Jamahiriya	1 D-1	1	1 P-3	1	2
Malawi	–	–	1 P-4	1	1
Morocco	–	–	1 P-4	1	1
Mozambique	–	–	1 P-3	1	1
Rwanda	–	–	1 P-3	1	1
Somalia	–	–	1 P-5, 1 P-3	2	2
Sudan	–	–	1 D-2, 1 D-1	2	2
Swaziland	–	–	1 P-4	1	1
Tunisia	1 P-4	1	2 P-3	2	3
Uganda	1 P-5	1	1 P-2	1	2
United Republic of Tanzania	–	–	1 P-3	1	1
Zaire	–	–	1 P-4	1	1
Zambia	–	–	1 P-5	1	1
Zimbabwe	–	–	1 P-2	1	1
Subtotal		7		28	35
Asian States					
Afghanistan	–	–	1 P-4	1	1
Bangladesh	–	–	1 D-2	1	1
Burma	1 P-5	1	M	–	1
China	–	–	1 P-5, 2 P-3, 1 P-2	4	4
Democratic Yemen	1 P-5	1	–	–	1
India	1 D-2	1	1 P-4, 1 P-3	2	3
Japan	–	–	1 D-1, 1 P-5, 1 P-4, 1 P-2	4	4
Jordan	–	–	1 P-5	1	1
Kuwait	–	–	1 L-5	1	1
Lebanon	1 P-2, 1 P-1	2	–	–	2
Pakistan	–	–	1 P-5, 1 P-2	2	2
Philippines	–	–	1 P-3	1	1
Sri Lanka	–	–	2 P-4	2	2
Syrian Arab Republic	–	–	1 L-5	1	1

	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Asian States (continued)					
Thailand	–	–	1 P-4	1	1
Turkey	–	–	1 L-1	1	1
Yemen	1 D-1	1	1 P-1	1	
Subtotal		6		23	29
Eastern European States					
Hungary	–	–	1 P-5	1	1
Poland	1 P-5	1	–	–	1
USSR	1 ASG, 1 P-4	2	5 P-4, 1 P-3, 1 P-2	7	9
Yugoslavia	–	–	1 D-2	1	1
Subtotal		3		9	12
Latin American States					
Argentina	–	–	1 P-5, 1 P-4, 1 P-3	3	3
Brazil	1 D-2	1	–	1	1
Chile	–	–	1 P-5	1	1
Guatemala	–	–	1 P-4	–	1
Haiti	1 P-2	1	–	–	1
Jamaica	–	–	1 D-2	1	1
Mexico	–	–	2 P-5	2	2
Panama	1 P-4	1	–	–	1
Peru	–	–	1 D-2	1	1
Trinidad and Tobago	–	–	1 P-5	1	1
Uruguay	–	–	1 P-4	1	1
Subtotal		3		11	14

	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Western European and other States					
Australia	—	—	1 P-3	1	1
Austria	—	—	2 P-3, 1 P-2	3	3
Belgium	—	—	1 P-4, 1 P-3, 1 P-2	3	3
Canada	—	—	1 P-5, 1 P-3, 1 P-2	3	3
Denmark	—	—	1 P-3	1	1
Finland	—	—	1 P-5, 1 P-3, 1 P-2	3	3
France	1 P-4	1	1 D-2, 1 P-5, 1 P-4, 1 P-3, 2 P-2	6	7
Germany, Federal Republic of	1 P-5, 1 P-2	2	1 ASG, 1 D-1, 1 P-5	3	5
Greece	1 P-5	1	—	—	1
Iceland	—	—	1 P-4	1	1
Ireland	—	—	1 P-2	1	1
Italy	1 D-1, 1 P-4	2	1 D-2, 1 P-5, 1 P-3, 1 P-2	4	6
Netherlands	—	—	1 D-2, 1 L-5, 1 P-4	3	3
New Zealand	—	—	1 P-3	1	1
Spain	—	—	1 L-5, 1 P-3	2	2
Sweden	1 P-4	1	1 D-1, 1 P-4, 2 P-2, 1 P-1	5	6
United Kingdom	—	—	2 D-1, 1 P-5, 3 P-4, 2 P-3, 1 P-1	9	9
United States of America	1 ASG, 1 P-5, 1 P-3	3	3 P-5, 4 P-4, 1 P-3	8	11
Subtotal		10		57	67
Others					
Stateless	1 P-4	1	—	—	1
Subtotal		1	—	—	1
TOTAL		30		128	158

a The breakdown by region and country in the present annex does not correspond to that of the United Nations. As membership in the Governing Council is distributed among the five regions listed in General Assembly resolution 2997 (XXVII), it was decided to present this list in terms of the same regional groupings.

b This includes staff on regular budget temporary posts and Fund posts, and all language staff.

Annex III

PUBLICATIONS AND PAPERS ISSUED IN 1983

A. PRINTED PUBLICATIONS

OFFICE OF THE ENVIRONMENT PROGRAMME

Global Environmental Monitoring System
(Budget subline 1301)

Title	Produced by	Financed by	Languages
Selected Radionuclides: Environmental Health Criteria, No. 25	WHO	UNEP/ILO/WHO	E
The IUCN Invertebrate Red Data Book	IUCN	IUCN/UNEP/WWF	E
The Mammals of Africa: Country Lists	IUCN	IUCN/UNEP/WWF	E
Assessment of human exposure to selected organochloride compounds through biological monitoring	UNEP/WHO	UNEP/WHO	E
	INFOTERRA *(Budget subline 1302)*		
International Directory of Sources, 1983/84	UNEP	UNEP	
Vols. A-G, January 1983			E F R S
Vol. H, July 1983			E F R S
Vol. I, July 1983			F S
Index of Sources (Cumulative), 1983/84	UNEP	UNEP	
Vol. A-G, January 1983			E F R S
Vol. A-H, July 1983			E R
Vol. A-I, July 1983			F S
Chemical Safety: Information Sources	UNEP	UNEP	E
INFOTERRA Bulletin, vol. V, Nos. 1-6	UNEP	UNEP	E F R S
Bibliography of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972	UNEP	UNEP	E

Bibliography of the Annual Sessions of the Governing Council, 1973-1983	UNEP	UNEP	E
INFOTERRA Thesaurus of Environmental Terms (preliminary edition)	UNEP	UNEP	E
International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 1304)			
IRPTC Bulletin, vol.5, No. 3	UNEP	UNEP	EFS
IRPTC Bulletin, vol.5, No. 3	USSR/UNEP	UNEP	R
IRPTC Bulletin, vol.6, No. 1	UNEP	UNEP	EFS
IRPTC Bulletin, vol.6, No. 1	USSR/UNEP	UNEP	R
IRPTC Legal File 1983, vols. I and II	UNEP	UNEP	E
IRPTC Data Profiles for 450 chemicals	UNEP	UNEP	E
International Register of Potentially Toxic Chemicals—Part A (Revision)	UNEP	UNEP	E
Toxicometric Parameters of Industrial Toxic Chemicals under Single Exposure (Reference book translated from Russian)	USSR/UNEP	UNEP	E
Hygienic and Toxicological Criteria of Harmfulness in Evaluating Hazards of Chemical Compounds (Monograph translated from Russian)	USSR/UNEP	UNEP	E
Maximum Allowable Concentrations and Tentative Safe Exposure Levels of Harmful Substances in the Environmental Media (Hygienic standards officially approved in the USSR)	USSR/UNEP	UNEP	E
Scientific Reviews of Soviet Literature on Toxicity and Hazards of Chemicals (Nos. 27-36)	USSR/UNEP	UNEP	ER
Occupational Exposure Limits for Airborne Toxic Substances (update)	UNEP/ILO	UNEP/ILO	E
Research and assessment (Budget subline 1305)			
Cadmium Exposure and Indicators of Kidney Function. MARC Report No. 29	MARC	UNEP	E
Exposure Commitment Assessments of Environmental Pollutants. volume 3: Summary Exposure Assessments for Copper, Vanadium Antimony. MARC Report No. 30	MARC	UNEP	E

Title	Produced by	Financed by	Languages
Historical Monitoring, MARC Report No. 31	MARC	UNEP	E
Biological Monitoring of Environmental Pollutants, part 1: Terrestrial Organisms. MARC Report No. 32	MARC	UNEP	E
Modelling Exposure Routes of Trace Metals from Sources to Man (Proceedings of a conference in Berlin)	MARC	UNEP	E
Prospects for Global Ocean Pollution Monitoring (Proceedings of the First National Symposium on Integrated Global Ocean Monitoring)	MARC	UNEP	E
Comparative Methodology for Radiological and Toxicological Assessments	MARC	UNEP/ United Nations Scientific Committee on the Effects of Atomic Radiation	E
Urban Air Pollution, 1973-1980	MARC	UNEP	E
	Health of people and of the environment (Budget sublines 0107 and 0108)		
Selected Radionuclides: Environmental Health Criteria, No. 25	WHO	UNEP/ILO/WHO	E
Environmental Health Criteria: Executive Summaries on lead; nitrates, nitrites and N-nitroso compounds; carbon disulfide; mycotoxins; ultraviolet radiation; tin and organotin compounds; Radio frequency and microwaves; manganese; arsenic; hydrogen sulfide	WHO	UNEP/WHO	E
Environmental Carcinogens: Selected Methods of Analysis. Vol.6, N-nitroso compounds	IARC/WHO	UNEP/WHO	E
Management of Hazardous Waste: Policy Guidelines and Code of Practice	WHO	UNEP/WHO	E

FAO/UNEP/WHO Guidelines for Surveillance, Prevention and Control of Cysticercosis/Taeniasis	WHO	FAO/UNEP/ WHO	E
Guidelines for Integrated Control of Cotton Insect Pests (Revised edition)	FAO	FAO/UNEP	E
Integrated Pest Control: A Multidisciplinary Conceptual Statement by the FAO/UNEP Panel of Experts on Integrated Pest Control	FAO	FAO/UNEP	E
	Arid and semi-arid lands ecosystems including desertification (Budget line 1700)		
Desertification Control, Nos. 8 and 9	UNEP	UNEP	E
Problems and Prospects of Desertification Control in the ESCAP Region	ESCAP/UNEP	ESCAP/UNEP	E
	Water (Budget subline 1107)		
Rain and Stormwater Harvesting in Rural Areas	UNEP/Tycooly	UNEP	E
Hydrology of Humid Tropical Regions (Proceedings of a Symposium) of Scientific Hydrology	International Association	UNEP	E
Dissolved Loads of Rivers and Surface Water Quantity/Quality Relationships (Proceedings of a Symposium)	International Association of Scientific Hydrology	UNEP	E
	Mountain, island, coastal and other ecosystems (Budget subline 1105)		
Global Status of Mangrove Ecosystems	IUCN/UNEP/ WWF	IUCN/UNEP/ WWF/ Australia/ France Netherlands	E
	Genetic resources (Budget subline 1108)		
Animal Genetic Resources Information bulletin, No. 1	FAO	UNEP/FAO	Trilingual (E F S)
Animal Genetic Resources Conservation and Management: Data Bank Establishment in Africa	FAO	UNEP/FAO	E

Title	Produced by	Financed by	Languages
Avances en Digestión Anaeróbica—Memorias del Segundo Simposio Panamericano de Combustibles y Productos Químicos via Fermentación	Guatemala MIRCEN ICRO/OAS	Guatemala MIRCEN/UNEP/ ICRO/OAS	S
Fermentaciones en Substratos Sólidos	Guatemala MIRCEN	Guatemala MIRCEN/UNEP/ UNESCO/ICRO/ OAS	S
16 reports on biomass MIRCEN	Guatemala MIRCEN/UNEP/ UNESCO	Guatemala	E
MIRCEN News, No. 5	UNESCO	UNESCO/UNEP/ ICRO	E
World Catalogue of Rhizobium Collections	World Data Centre for Micro-organnisms	UNEP/UNESCO/ FAO	E
	Wildlife and protected areas (Budget subline 1110)		
The World Charter for Nature—A Background Paper	Elizabeth Haub Foundation/ United Nations/ UNEP/IUCN	Elizabeth Haub Foundation/ UNEP/IUCN	E
MAB Information System: Biosphere Reserves—Compilation 3, September 1983	IUCN	UNEP	E
The IUCN Invertebrate Red Data Book	IUCN	UNEP/WWF	E
Traffic Bulletin, vol. IV, No. 6; vol. V, Nos. 1-5	IUCN Parties/ People's Trust for Endangered Species	UNEP/IUCN/ CITES	E
CITES Identification Manual Parties	CITES/CITES Parties	UNEP/CITES	E
Directory (of CITES management scientific authorities)	CITES Parties	UNEP/CITES	Trilingual (E F S)
Ecological Structures and Problems of Amazonia	IUCN/UNEP	UNEP/IUCN	E
IUCN Species Survival Commission Newsletter	IUCN	UNEP/IUCN/ WWF	E
Culture and Conservation	IUCN/UNEP	UNEP/IUCN	E
Tigerpaper, vol. X, Nos. 1, 2, 3 and 4	FAO	FAO	E

FAO 133

Parks, vol. 7, No. 4; vol. 8, Nos. 1, 2 and 3 Service	United States National Park Canada/New Zealand/United States National Park Service/WWF	UNEP/IUCN/ FAO/UNESCO/ Parks	E
Elephants and Rhinos in Africa—A Time for Decision	IUCN	UNEP/IUCN/ WWF	E F
IUCN Bulletin, vol. 14	IUCN	UNEP/IUCN/ WWF	E
IUCN Bulletin, supplement 4/1983 (World Conservation Strategy in action)	IUCN	UNEP/IUCN/ WWF	E

Integrated approach to environment and development, and environmental management (Budget sublines 0404 and 1001)

Environmental Decision-Making, vol. one	UNEP	UNEP	E
Managing the Environment: An Analytical Examination of Problems and Procedures	UNEP	UNEP	E

Environmentally sound and appropriate technology (Budget subline 0402)

Biotechnology and Waste Treatment; Proceedings of a Workshop sponsored by UNEP	University of Waterloo, Canada/ UNEP	University of Waterloo/ UNEP	E

Industry and environment (Budget subline 0408)

Guidelines on Management of Agricultural and Agro-industrial Residue Utilization	UNEP	UNEP	E
Guidelines for Post Harvest Food Loss Reduction Activities	UNEP	UNEP	E
Environmental Guidelines for the Direct Reduction Route to Steel Making	UNEP	UNEP	E
Environmental Aspects of the Direct Reduction Route to Steel Making—A Technical Review	UNEP	UNEP	E
Overview on Traditional Post-harvest Technology of Perishable Tropical Staples	UNEP/FAO/ Tropical Development and Research Institute	UNEP/FAO	E

Title	Produced by	Financed by	Languages
The Impact of Water-based Drilling Muds on the Environment	UNEP/ International Petroleum Industry Environmental Conservation Association (IPIECA)/Oil Industry International Exploration and Production Forum	IPIECA/Oil Industry International Exploration and Production Forum	E
Environmental Guidelines for the Diesel Vehicle	UNEP	UNEP	E
Environmental Management in the Pulp and Paper Industry:			
– Final Report	UNEP	UNEP	E
– Group Projects	UNEP	UNEP	E
– Directory of Workshop Participants	UNEP	UNEP	E
– Executive Summary	UNEP	Swedish Internan-itional Development Authority	E F S Portuguese
Industry and Environment newsletter			
– Vol. 6, Nos. 1, 2, 3, 4	UNEP	UNEP	E F
– Special issue No. 4	UNEP	UNEP	E F S
	Marine pollution (Budget subline 0501)		
Determination of Total Coliforms in Sea-water by the Membrane Filtration Culture Method. Reference Methods for Marine Pollution Studies, No. 2/Rev.1	UNEP	UNEP/WHO	E F
Determination of Faecal Coliforms in Sea-water by the Membrane Filtration Culture Method. Reference Methods for Marine Pollution Studies, No. 3/Rev.1	UNEP	UNEP/WHO	E F

Determination of Faecal Streptococci in Sea-water by the Membrane Filtration Culture Method. Reference Methods for Marine Pollution Studies, No. 4/Rev.1	UNEP	UNEP/WHO	E F
Determination of Faecal Coliforms in Bivalves by Multiple Test Tube Method. Reference Methods for Marine Pollution Studies, No. 5/Rev.1	UNEP	UNEP/WHO	E F
Sampling of Selected Marine Organisms and Sample Preparation for Trace Metal Analysis. Reference Methods for Marine Pollution Studies, No. 7/Rev.1	UNEP	UNEP/FAO/ IAEA	E
Determination of Total Coliforms in Sea-water by Multiple Test Tube Method. Reference Methods for Marine Pollution Studies, No. 21	UNEP	UNEP/WHO	E
Determination of Faecal Coliforms in Sea-water by Multiple Test Tube Method. Reference Methods for Marine Pollution Studies, No. 22	UNEP	UNEP/WHO	E
The Evaluation of the Hazards of Harmful Substances Carried by Ships. GESAMP Reports and Studies, No. 17	IMO	GESAMP sponsors	E
Report of the thirteenth session of GESAMP. GESAMP Reports and Studies, No. 18	WHO	GESAMP sponsors	E
An Oceanographic Model for the Dispersion of Wastes disposed of in the Deep Sea. GESAMP Reports and Studies No. 19	IAEA	GESAMP sponsors	E
	Regional seas programme (Budget subline 0503)		
Survey of Tar, Oil, Chlorinated Hydrocarbons and Trace Metal Pollution in Coastal Waters of the Sultanate of Oman. UNEP Regional Seas Reports and Studies, No. 5	UNEP	IAEA/UNEP	E

Title	Produced by	Financed by	Languages
The Health of the Oceans. UNEP Regional Seas Reports and Studies, No. 16	UNEP	GESAMP	E
Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-east Pacific. Regional Seas Reports and Studies, No. 20	UNEP	Permanent Commission for the South Pacific/UNEP	ES
Regional Seas Programme in Latin America and Wider Caribbean. Regional Seas Reports and Studies, No. 22	UNEP	UNEP	EFS
Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL) – Phase I: Programme Description. Regional Seas Reports and Studies, No. 23	UNEP	FAO/UNESCO/ IOC/WHO/ WMO/IAEA/ UNEP	E
Action Plan for the Protection and Development of the Marine and Coastal Areas of the East Asian Region. Regional Seas Reports and Studies, No. 24	UNEP	UNEP	E
Marine Pollution. Regional Seas Reports and Studies, No. 25	UNEP	UNEP	E
Action Plan for the Caribbean Environment Programme. Regional Seas Reports and Studies, No. 26	UNEP	UNEP	EFS
Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region. Regional Seas Reports and Studies, No. 27	UNEP	UNEP	EF
Long-term Programme for Pollution Monitoring and Research in the Mediterranean (MED POL) – Phase II. Regional Seas Reports and Studies, No. 28	UNEP	UNEP	EF
Action Plan for Managing the Natural Resources and Environment of the South Pacific Region. Regional Seas Reports and Studies, No. 29	UNEP	SPC/SPEC/ ESCAP	EF
Ocean Energy Potential of the West African Region. Regional Seas Reports and Studies, No.30	UNEP	United Nations/ UNEP	EF

The State of the Environment in the South Pacific. Regional Seas Reports and Studies, No.31	UNEP		EF
Pollutants from Land-based Sources in the Mediterranean. Regional Seas Reports and Studies, No. 32	UNEP	UNEP/ECE/ UNIDO/WHO/ IAEA	EF
Onshore Impact of Offshore Oil and Natural Gas Development in the West African Region. Regional Seas Reports and Studies, No. 33	UNEP	UNEP	EF
Action Plan for the Protection of the Mediterranean. Regional Seas Reports and Studies, No. 34	UNEP	UNEP	EF
Action Plan for the Protection of the Marine Environment and the Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. Regional Seas Reports and Studies, No. 35	UNEP	UNEP	E
The State of Marine Pollution in the Wider Caribbean Region. Regional Seas Reports and Studies, No. 36	UNEP	UNEP/ECLA	EFS
Environmental Management Problems in Resource Utilization and Survey of Resources in the West African Region. Regional Seas Reports and Studies, No. 37	UNEP	United Nations/ UNEP	EF
Legal Aspects of Protecting and Managing the Marine and Coastal Environment of the East African Region. Regional Seas Reports and Studies, No. 38	UNEP	FAO/UNEP	EF
Marine and Coastal Conservation in the East African Region. Regional Seas Reports and Studies, No. 39	UNEP	IUCN/UNEP	EF
Radioactivity in the South Pacific. Regional Seas Reports and Studies, No. 40	UNEP	SPC/SPEC/ ESCAP/UNEP	E

Title	Produced by	Financed by	Languages
Socio-economic Activities that may have an Impact on the Marine and Coastal Environment of the East African Region. Regional Seas Reports and Studies, No. 41	UNEP	UNEP	E
	Energy (Budget line 0700)		
Energy Alternatives in Latin America	UNDP/UNEP/ Latin American Energy Organization	UNEP/UNDP/ Latin American Energy Organization	E
	Environmental education and training (Budget sublines 0305 and 0306)		
Activities of the UNESCO-UNEP International Environmental Education Programme (1975-1983)	UNESCO	UNEP/UNESCO	E F
Connect (UNESCO/UNEP environmental education newsletter), vol. VIII, No. 3	UNESCO	UNEP/UNESCO	A E F R S
Glossary of Environmental Education Terms	UNESCO	UNEP/UNESCO	E R
Planificación del Medio Ambiente, por Julio Carrizosa. Cuadernos del CIFCA, No. 27	CIFCA	CIFCA/UNEP	S
	Environmental law (Budget subline 1002)		
Register of International Treaties and Other Agreements in the Field of the Environment	UNEP	UNEP	E
Handbook of Environmental Legislation and Machinery	UNEP	UNEP	E
	Information (Budget subline 0303)		
Unisera, No. 2, 1982 (published in 1983)	UNEP	UNEP	S
Earth Matters	UNEP	UNEP	E

Mazingira

Vol. 7, Nos. 1, 2, 3 and 4	UNEP	UNEP	E
Vol. 7, Nos. 1, 2 and 3	UNEP	UNEP	S
Vol. 7, Nos. 1 and 2	UNEP	UNEP	F

OFFICE OF THE ENVIRONMENT FUND AND ADMINISTRATION

Report to Governments, Nos. 35-41	UNEP	UNEP	A C E F R S

B. MAJOR STUDIES, PAPERS AND REPORTS

Title	Produced by	Financed by	Languages
OFFICE OF THE ENVIRONMENT PROGRAMME			
Global Environmental Monitoring System (Budget subline 1301)			
Report of the Interregional Review Meeting on Water Quality Monitoring Programmes	WHO	UNEP/WHO/ UNESCO/WMO	E
Guidelines for the study of dietary intakes of chemical contaminants	WHO	UNEP/WHO/ FAO	E
Criteria/soft-hardware for global land/soil monitoring system	UNEP	UNEP	E
Guidelines for preliminary glacier inventories	Eidgenossische Technische Hochschule (ETH), Zurich	UNEP/UNESCO/ International Commission on Snow and Ice/ETH	E
World Glacier Inventory annual report	ETH	UNEP/UNESCO/ International Commission on Snow and Ice/ETH	E
Provisional daily atmosphere carbon dioxide concentrations as measured at BAPMoN sites for the year 1981	WMO	UNEP/WMO	E
Effects of sulphur compounds and other air pollutants on visibility	WMO	UNEP/WMO/ ECE	E
Forecasting of air pollution with emphasis on research in the USSR	WMO	UNEP/WMO	E

Title	Produced by	Financed by	Languages
General consideration and examples of data evaluation and quality assurance procedures applicable to BAPMoN precipitation chemistry observations	WMO	UNEP/WMO	E
	INFOTERRA (Budget subline 1302)		
INFOTERRA and environmental information; Part I: Consultant report	UNEP	UNEP	E
	International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 1305)		
Report of the Evaluation Meeting on the Training Course in Preventive Toxicology, Moscow, 9 and 10 June 1983	USSR/UNEP	UNEP	E R
	Outer limits (Budget subline 1303)		
UNEP Meeting of the Scientific Advisory Committee of the World Climate Impact Studies Programme: Report of the meeting	UNEP	UNEP	E
Co-ordinating Committee on the Ozone Layer: Report of the sixth session	UNEP	UNEP	E
Assessing impacts of climatic change in marginal areas: The search for an appropriate methodology	IIASA	UNEP	E
Multidisciplinary meeting on the impact of drought on socio-economic systems in Africa: Report of the meeting	UNEP	UNEP	E
Development of the implementation plan for the International Satellite Land Surface Climatology Project (draft report)	ICSU/Committee on Space Research/International Association of Meteorology and Atmospheric Physics	UNEP	E

Inventory of ongoing and planned climate impact studies and list of scientists involved in the research work	UNEP	UNEP	E
	Environmental data (Budget line 1600)		
NGOs' actions in combating desertification: Niger, Senegal and Upper Volta	ELC	UNEP/ELC	E F
	Environmental aspects of human settlements planning (Budget subline 0104)		
International Symposium on Solid Waste Management for Developing Countries	UNEP	UNEP/Federal Republic of Germany	E
—Background papers			E
—Case study materials			E
—Synopsis of participating country monographs			E
—Summary report			E
UNEP Training Course in Leak Detection and Prevention—Information			
—Country report of water supply	National Water Leak Survey Engineering Association of Japan/UNEP	UNEP	E
	Health of people and of the environment (Budget sublines 0107 and 0108)		
Report of the third meeting of the WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control (PEEM)	WHO	WHO/FAO/ UNEP	E
The PEEM Newsletter Nos. 4, 5, 6, 7	WHO	WHO/FAO/ UNEP	E
La lettre d'information du TEAE, Nos. 1, 2	WHO	WHO/FAO/ UNEP	F
Immunodiagnosis of human hydatid disease in patients with calcified cysts	Pan American Health Organization	UNEP	E

Title	Produced by	Financed by	Languages
Arid and semi-arid lands ecosystems including desertification (Budget line 1700)			
Assessment of the status and trend of desertification	UNEP	UNEP	E
Evaluation of the implementation of the Plan of Action to Combat Desertification	UNEP	UNEP	E
Review of studies on financing and institutional arrangements	UNEP	UNEP	E
Desertification: Demographic evidence, 1973-1983	UNEP	UNEP	E
Climate and desertification: A revised analysis	WMO/UNEP	WMO/UNEP	E
The United Nations University and the Plan of Action to Combat Desertification	UNU	UNU	E
Directory of NGOs working in projects and activities related to desertification control	UNEP/ELC	UNEP	E
MAB's activities related to the Plan of Action to Combat Desertification	UNESCO	UNEP	E
Desertification assessment and mapping project—Country test studies	FAO	UNEP	E
Regional assessment of desertification in the ECWA region	UNEP/ECWA	UNEP	E
Assessment of progress in the implementation of the Plan of Action to Combat Desertification in the Sudano-Sahelian region 1977-1984	UNEP/UNSO	UNEP	E
Assessment of the current status and trend of desertification in the Kalahari desert region countries	UNEP/ECA	UNEP	E

Implementation of the Plan of Action to Combat Desertification in the ESCAP region: Assessment	UNEP/ESCAP	UNEP	E
Regional assessment for northern Mediterranean countries	UNEP	UNEP	E
Regional assessment of desertification—North America and Mexico	UNEP/International Center for Arid and Semi-arid Land Studies	UNEP	E
Regional assessment of desertification problems and control among 12 Latin American countries (1970-1980)	UNEP/Instituto Argentino de Investigaciones de las Zonas Aridas	UNEP	E
Regional assessment on desertification in north Africa	ALECSO/UNEP	UNEP	E F
What do we know about desertification? (Paper presented at the annual meeting of the American Association for the Advancement of Science, 30 May 1983)	UNEP	UNEP	E
	Soils (Budget subline 1106)		
Draft plan of action for the implementation of the World Soils Policy (Revised version)	UNEP	UNEP	ACEFRS
Environmental guidelines for farming systems principles for improving food production and control of soil degradation in the arid, semi-arid and humid tropics	UNEP	UNEP	E
Guidelines for the control of soil degradation	FAO/UNEP	UNEP	E
	Genetic resources (Budget subline 1108)		
Animal genetic resources: Needs and opportunities (First draft)	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
	Wildlife and protected areas (Budget subline 1110)		
IUCN Commission on Environmental Planning Newsletter (six issues)	IUCN	UNEP/IUCN	E
Position statements on: Use of pesticides, oil pollution and associated problems, conservation and management of tidal flats, salt marshes, estuaries, seagrass beds, rocky shores, ocean trenches, mangrove ecosystems, population and natural resources, conservation of Antarctica, introductions, reintroductions and restocking	IUCN/UNEP	UNEP/IUCN	E
Economic use of tropical moist forest	IUCN/UNEP	IUCN/UNEP	E
Conservation of ecological processes	IUCN/UNEP	IUCN/UNEP	E
Guidelines for the conservation of African lakes	IUCN/UNEP	IUCN/UNEP	E
The Gourma elephants of Mali	UNEP	UNEP	E
Why conservation?	IUCN/UNEP	UNEP/IUCN	E
National conservation strategy reports (Belize, India, Malaysia, Nepal, Uganda, Zambia)	IUCN/UNEP	UNEP/IUCN	E
(Ivory Coast, Senegal)			F
Feral mammals—Problems and potential (proceedings of a workshop)	IUCN	UNEP/IUCN/ WWF	E
	Integrated approach to environment and development, and environmental management (Budget sublines 0404 and 1001)		
Draft guidelines—Aesthetic and environmental impact assessment for the Trans-European North-South Motorway (TEM) (AECOTEM)	ECE	UNDP/ECE/ UNEP	E
Environmental implications of the Salto Grande Multipurpose Hydraulic Development Scheme—Final Report	Salto Grande Joint Technical Commission/UNEP	UNEP/ Argentina/ Uruguay	ES

Environmental impact assessment – Gwachon New Town Development Project	UNEP	UNEP	E
Draft handbook on environmental impact assessment for use in developing countries	UNEP	UNEP	E
A handbook on environmental impact assessment for public decision-makers	UNEP	UNEP	E
	Environmentally sound and appropriate technology (Budget subline 0402)		
International Conference on Water Hyacinth, Hyderabad, India, 7-11 February 1983	Regional Research Laboratory, Hyderabad/UNEP/ Commonwealth Science Council	UNEP/ Commonwealth Science Council	
– 6 lectures and 70 background papers			E
	Industry and environment (Budget subline 0408)		
Report on Regional ECA/UNEP Workshop on Industrial Environmental Impact Assessment and Environmental Criteria for the Siting of Industry, Addis Ababa, 27-30 June	UNEP/ECA	UNEP/ECA	E F
Final Record of the fourth meeting of the UNEP Environmental Consultative Committee on the Pulp and Paper Industry, Pointe-Claire, Canada, 20-22 June	UNEP	UNEP	E
Record of WTO/UNEP Workshop on the Environmental Aspects of Tourism (WTO/UNEP/WS/T.7)	UNEP/WTO	UNEP/WTO	E F S
Review of replies from member and affiliated countries and organizations	UNEP/WTO	UNEP/WTO	E
Draft secretariat report on the environmental aspects of tourism (WTO/UNEP/WS/T.3)	UNEP/WTO	UNEP/WTO	E F S
Case-study on tourism and environment – The Sri Lanka experience (WTO/UNEP/WS/T.2)	UNEP/WTO	UNEP/WTO	E F S

Title	Produced by	Financed by	Languages
Second draft on environmental aspects of iron and steel production – A technical review	UNEP	UNEP	E
Environmental aspects of alumina production – A technical review (Draft)	UNEP	UNEP	E
Draft guidelines for the environmental management of alumina production	UNEP	UNEP	E
	Living marine resources (Budget subline 0502)		
National legislation concerning the conservation, management and utilization of marine mammals	FAO	UNEP	E
Identification of specific protective measures that require undertaking by Governments and organizations for the enhancement of the survival of threatened populations of marine mammals	IUCN	UNEP	E
Report of the *Ad Hoc* Planning and Co-ordinating Consultation on UNEP/FAO Draft Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals	UNEP	UNEP	E
Tentative summary and costings of projects under Plan of Action for Marine Mammals	UNEP	UNEP	E F S
Report of the IWC Working Group on Cetacean Proposals for the FAO/UNEP Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals	International Whaling Commission (IWC)	UNEP	E
Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals – Research proposals for sirenians	UNEP	UNEP	E

Regional seas programme
(Budget subline 0503)

Report of the Expert Meeting on a Convention for the Protection and Development of the Natural Resources and Environment of the Pacific Region	South Pacific Regional Environment Programme	SPC/ESCAP/ UNEP	EF
Report of the Fourth Meeting of National Blue Plan Focal Points (UNEP/IG.43/INF.4)	UNEP/Mediterranean Trust Fund		EF
Report of the Workshop on Beach-cleaning Methodologies in the Caribbean Islands	IMO	UNEP	ES
Proceedings of the Fifteenth Pacific Science Congress	South Pacific Regional Environment Programme	Pacific Science Association/-UNEP	E
Report of the third meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols (UNEP/IG.43/6)	UNEP	UNEP/Mediterranean Trust Fund	AEFS
Report of the Third Meeting of Experts on Regional Agreements for the Wider Caribbean Region (UNEP/IG.39/4)	UNEP	UNEP	EFS
Report of the second meeting of the Monitoring Committee on the Action Plan for the Caribbean Environment Programme (UNEP/IG.38/6)	UNEP	UNEP	EFS
Final Act of the Conference of Plenipotentiaries on the Protection and Development of the Marine Environment of the Wider Caribbean Region	UNEP	UNEP	EFS
Report of the second Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme (UNEP/IG.42/3)	UNEP	UNEP	FFS
Report of the second meeting of the Co-ordinating Body on the Seas of East Asia (UNEP/IG.44/11)	UNEP	UNEP	E

Title	Produced by	Financed by	Languages
Report of the fifteenth meeting of the Inter-Agency Advisory Committee (IAAC) for MED POL (UNEP/IAAC.15/3)	UNEP/Mediterranean Trust Fund	E	
	Environmental law (Budget subline 1002)		
Ad hoc Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer			
Report of the second session (UNEP/WG.78/8)	UNEP	UNEP	A E F R S
Revised draft convention for the protection of the ozone layer, with additional commentary (UNEP/WG.78/10)	UNEP	UNEP	A E F R S
Possible contents of annexes and/or protocols (UNEP/WG.78/11)	UNEP	UNEP	A E F R S
Executive summary of the recommendations of the Co-ordinating Committee on the Ozone Layer (UNEP/WG.78/12)	UNEP	UNEP	A E F R S
Report of the second part of the second session (UNEP/WG.78/13)	UNEP	UNEP	A E F R S
Second revised draft convention for the protection of the ozone layer, with additional commentary (UNEP/WG.94/3)	UNEP	UNEP	A E F R S
Draft annex concerning measures to control, limit and reduce the use and emissions of fully halogenated chlorofluorocarbons (CFCs) for the protection of the ozone layer, with comments (UNEP/WG.94/4 and Adds. 1 and 2)	UNEP	UNEP	A E F R S
Report of the first part of the third session (UNEP/WG.94/5)	UNEP	UNEP	A E F R S

Third revised draft convention for the protection of the ozone layer (with draft annexes I and II) (UNEP/WG.94/8)	UNEP	UNEP	AEFRS
Revised draft protocol concerning measures to control, limit and reduce the emissions of chlorofluorocarbons (CFCs) for the protection of the ozone layer (UNEP/WG.94/9)	UNEP	UNEP	AEFRS
Ad hoc Working Group of Experts on the Protection of the Marine Environment Against Pollution from Land-based Sources			
Legal elements suggested for inclusion in the draft guidelines/ principles for the protection of the marine environment against pollution from land-based sources (UNEP/WG.92/2 and Add.1)	UNEP	UNEP	ACEFRS
Technical aspects of the control of marine pollution from land-based sources (UNEP/WG.92/3 and annex)	UNEP/WHO	UNEP	ACEFRS
Report of the Working Group on its first session (UNEP/WG.92/4)	UNEP	UNEP	ACEFRS
Ad hoc Working Group of Experts on Environmentally sound Management of Hazardous Wastes			
Transfrontier movements of hazardous wastes with regard to developing countries (UNEP/WG.95/2)	UNEP/WHO	UNEP	AEFRS
Nomenclature and hazard evaluation systems for chemicals (UNEP/WG.95/3)	UNEP/ECE	UNEP	AEFRS
Draft guidelines for the environmentally sound management of hazardous wastes (UNEP/WG.95/4)	UNEP UNEP	UNEP UNEP	AEFRS AEFRS
Ad hoc Working Group of Experts for the Exchange of Information on Potentially Harmful Chemicals (in Particular Pesticides) in International Trade			
The state of information on potentially harmful chemicals in international trade (UNEP/WG.96/2)	UNEP	UNEP	AEFRS

Title	Produced by	Financed by	Languages
Survey of programmes and activities for the exchange of information on potentially harmful chemicals (in particular pesticides) in international trade (UNEP/WG.96/3)	UNEP	UNEP	A E F R S
Draft guidelines for the exchange of information on trade and management of potentially harmful chemicals, in particular pesticides (UNEP/WG.96/4)	UNEP	UNEP	A E F R S
Environmental education and training (Budget sublines 0305 and 0306)			
Report of a meeting of experts from Governments and the scientific community to develop a programme of action for environmental education and training in the Africa region, Nairobi, 12-15 April 1983 (UNEP/WG.87/4)	UNEP	UNEP	E F
Educational module on environmental problems in cities	UNESCO	UNEP/UNESCO	E
Module for in-service environmental education training of primary school teachers and supervisors	UNESCO	UNEP/UNESCO	E
Module for in-service environmental education training of science teachers and supervisors for secondary schools	UNESCO	UNEP/UNESCO	E
Module for in-service environmental education training of social studies teachers and supervisors for secondary schools	UNESCO	UNEP/UNESCO	E
Module for pre-service environmental education training of science teachers and supervisors for secondary schools	UNESCO	UNEP/UNESCO	E
The interdisciplinary approach in environmental education: A guide for curriculum developers	UNESCO	UNEP/UNESCO	E
The interdisciplinary approach in environmental education: A guide for curriculum developers	UNESCO	UNEP/UNESCO	E

Annex IV

MEETINGS HELD IN 1983

A. EXPERT GROUP MEETINGS

Title	Venue and dates	Financed by	Organizer
	OFFICE OF THE EXECUTIVE DIRECTOR		
Environmental Accounting and its Use in Development Policy	Geneva, 23-25 February	UNEP	UNEP
Eleventh session of the UNEP Governing Council	Nairobi, 11-24 May	UNEP	UNEP
Meeting of High-level Representatives of Bilateral and Multilateral Development Assistance Institutions	Geneva, 7 and 8 July	UNEP	UNEP
Meeting of Designated Officials on Environmental Matters	Geneva, 21-23 September	UNEP	UNEP
Joint UNEP/UNCHS bureaux meeting	Nairobi, 13 and 14 December	UNEP/UNCHS	UNEP/UNCHS
	OFFICE OF THE ENVIRONMENT PROGRAMME		
	Global Environmental Monitoring System (GEMS) (Budget subline 1301)		
Expert Meeting on Integrated Monitoring	London, 25-29 July	UNEP/WMO/ UNESCO	UNEP/WMO/ UNESCO
Interregional Expert Review Meeting on Evaluation of Water Quality Data	Burlington, Canada, 17-21 October	UNEP/WHO	WHO

Expert Meeting on the World Glacier Inventory	Zurich, Switzerland, 21-23 November	UNEP/UNESCO Eidgenossische Technische Hochschule (ETH)	UNEP/UNESCO/ETH
	INFOTERRA ***(Budget subline 1302)***		
First meeting of the INFOTERRA Advisory Committee	Athens, 17-20 October	UNEP	UNEP
	International Register of Potentially Toxic Chemicals (IRPTC) ***(Budget subline 1304)***		
Second Meeting of Experts on a Listing of Dangerous Chemicals and Processes	Geneva, 21-25 November	UNEP	UNEP
	Ozone limits ***(Budget subline 1303)***		
Interdisciplinary meeting on the effects of drought on socio-economic systems in Africa	Nairobi, 13-16 December	UNEP	UNEP
Expert meeting on the meteorological aspects of the second phase of the European Monitoring and Evaluation Programme	Darmstadt, Federal Republic of Germany, 10-14 October	ECE/UNEP	ECE
Meeting of experts on climate and human health	Geneva, 5-9 December	WMO/WHO/ UNEP	WMO

Title	Venue and dates	Financed by	Organizer
	Research and assessment (Budget subline 1305)		
Ad hoc expert meeting for design of a global resource information data base	London, 31 May - 4 June	UNEP	UNEP
Expert meeting on environmental data	London, 4-6 October	UNEP	UNEP
	Environmental aspects of human settlements planning (Budget subline 0104)		
Expert panel meeting on environmental guidelines for human settlements planning	Washington, 12-17 October	UNEP	UNEP/UNCHS
Expert panel meeting on environmental impact assessment for urban development	Mexico City, 18-25 October	UNEP	UNEP/UNCHS
	Human and environmental health (Budget subline 0107)		
Meeting of the WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control	Rome, 12-16 September	WHO/ FAO/ UNEP	FAO

Meeting of the Editorial Committee of the Expert Group for the FAO/UNEP/WHO Guidelines for Surveillance, Prevention and Control of Cysticercosis/Taeniasis	Geneva, 9-12 May	FAO/UNEP/ WHO	WHO
Third session of the FAO/ UNEP/WHO Panel of Experts on Environmental Management for Disease and Vector Control	Rome, 11-16 September	FAO/UNEP/ WHO	FAO
Ad hoc session of the FAO/UNEP Panel of Experts on Integrated Pest Control	Rome, 28 and 29 November	FAO/UNEP	FAO

Arid and semi-arid lands ecosystems including desertification (Budget line 1700)

Meeting on the general assessment of progress in the implementation of the Plan of Action to Combat Desertification	Geneva, 18-20 July	UNEP	UNEP
Meeting on the promotion of the exchange of information and expertise on desertification matters in Africa	Nairobi, 6-8 September	UNEP	UNEP
Second meeting of the advisory panel for general assessment of progress in the implementation of the Plan of Action to Combat Desertification	Nairobi, 5-9 December	UNEP	UNEP

Title	Venue and dates	Financed by	Organizer
Meeting between the Executive Director and senior consultants and authors of basic documents on the general assessment of progress in the implementation of the Plan of Action to Combat Desertification	Geneva, 12-21 December	UNEP/ UNSO	UNEP
	Soils (Budget subline 1106)		
Expert Group meeting for the Formulation of guidelines of farming systems principles for food gain and control of soil for degradation in the arid, semi-arid and humid tropics	Hyderabad, India, 20-24 June	UNEP	International Crops Research Institute for the Semi-arid Tropics
	Water (Budget subline 1107)		
First meeting of the Advisory Group on Water Resources	Geneva, 29 June - 1 July	UNEP	UNEP
	Genetic resources (Budget subline 1108)		
Meeting of the ICRO Panel on Applied Microbiology and Biotechnology	Rome, 27-29 June	UNESCO/UNEP	UNESCO
Meeting on microbial technologies to overcome environmental problems from persistent pollutants	Paris, 4-8 July	UNEP	UNEP

First meeting of the FAO/UNEP Panel of Experts on Animal Genetic Resources Conservation and Management	Rome, 24-27 October	FAO/UNEP	FAO
Integrated approach to environment and development, and environmental management (Budget sublines 0404 and 1001)			
Fourth meeting of the Committee of International Development Institutions on the Environment	New York, 31 May - 3 June	UNEP and CIDIE members	UNEP
Expert group meeting on environmental impact assessment in developing countries	Guangzhou, China, 7-26 March	UNEP/ Government of China	UNEP/ Government of China
Environmentally sound and appropriate technology (Budget subline 0402)			
International Conference on the Water Hyacinth	Hyderabad, India, 7-11 February	UNEP/ Commonwealth Science Council	UNEP/ Commonwealth Science Council
Marine pollution (Budget subline 0501)			
Meeting of GESAMP Working Group 13	Geneva, 31 January - 4 February	UNEP sponsors	GESAMP
Thirteenth session of GESAMP	Geneva, 28 February - 4 March	UNEP sponsors	GESAMP
Meeting of GESAMP Working Group 23	Rome, 26-30 September	UNEP sponsors	GESAMP

Title	Venue and dates	Financed by	Organizer
	Living marine resources (Budget subline 0502)		
IWC Working Group on cetacean proposals for the FAO/UNEP Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals	La Jolla, United States, 31 October - 3 November	UNEP Whaling Commission (IWC)	International
Meeting to develop research proposals for sirenians	San Simeon, United States, 24-26 October	UNEP	UNEP
	Regional seas programme (Budget subline 0503)		
Consultation on environmental impact assessment	Tunis, 11-13 January	UNEP	UNEP
Meeting of Legal Experts on a Regional Convention for the South Pacific Region	Nouméa, New Caledonia, 24-28 January	UNEP ESCAP/SPEC	SPC/UNEP/
Co-ordinating meeting on non-oil-pollution studies in the East Asian Seas region	Manila, 14-18 February	UNEP/East Asian Seas Trust Fund	Government of the Philippines/ UNEP
Third Meeting of Experts on Regional Agreements for the Wider Caribbean Region	Cartagena, Colombia, 14-18 March	UNEP	UNEP
Fifteenth meeting of the Interagency Advisory Committee for MED POL	Athens, 12-14 April	UNEP/ Mediterranean Trust Fund	UNEP

Workshop on housing hygiene in the Mediterranean	Split, Yugoslavia, 9-13 May	WHO/UNEP/ Mediterranean Trust Fund	WHO/UNEP
Meeting of Legal and Technical Experts on the South-east Pacific Action Plan	Quito, 6-11 June	UNEP	CPPS/UNEP
Second expert meeting on a convention for the protection and development of the natural resources and environment of the South Pacific region	Nouméa, New Caledonia, 7-16 November	UNEP	SPC/UNEP/ ESCAP/SPEC
Second meeting of the working group for scientific and technical co-operation in the Mediterranean Action Plan region	Athens, 21-25 November	UNEP/ Mediterranean Trust Fund	UNEP
Meeting of experts on a draft convention and protocols for the East African Region	Nairobi, 6-14 December	UNEP	UNEP
	Energy (Budget line 0700)		
Meeting on energy storage in developing countries	Bangkok, 8-10 September	UNEP	UNEP/ESCAP
Meeting on energy supply and demand in rural areas of developing countries	Bangkok, 12-16 September	UNEP	UNEP
	Natural disasters (Budget line 1200)		
Expert meeting on space applications for acquisition of disaster-related data	Geneva, 14-18 June	UNDRO/ UNEP	UNDRO/ WMO

Title	Venue and dates	Financed by	Organizer
	Environmental law (Budget subline 1002)		
Second part of the second session of the *Ad hoc* Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer	Geneva, 11-15 April	UNEP/ Government of the Netherlands	UNEP
Third session of the *Ad hoc* Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer	Geneva, 17-21 October	UNEP	UNEP
First session of the *Ad hoc* Working Group of Experts on the Protection of the Marine Environment Against Pollution from Land-based Sources	Geneva, 28 November-2 December	UNEP	UNEP
	Environmental education and training (Budget sublines 0305 and 0306)		
Meeting of experts from Governments and the scientific community within the African region to develop a programme of action for environmental education and training	Nairobi, 12-15 April	UNEP	UNEP
Meeting of an advisory panel of experts on environmental education and training	Geneva, 27-29 June	UNEP	UNEP

Information
(Budget subline 0303)

Meeting of the Advisory Group on Non-governmental Organizations	Geneva, 6 and 7 January	UNEP	UNEP
Meeting of information consultants	Nairobi, 14-21 November	UNEP	UNEP

B. WORKSHOPS, SEMINARS AND OTHER MEETINGS

Title	Venue and dates	Financed by	Organizer	Number of participants
OFFICE OF THE ENVIRONMENT PROGRAMME				
Global Environmental Monitoring System (GEMS) (Budget subline 1301)				
Meeting to review the in-depth analysis of seven years of air monitoring data	Geneva, 26-28 January	UNEP/WHO	WHO	10
Ad hoc expert workshop on software design for the GEMS global resource information data base	London, 30 May-5 June	UNEP	UNEP	8
Workshop on Monitoring of Sahelian Pastoral Ecosystems	Dakar, 16-18 November	UNEP/FAO	FAO	40
Meeting of the Technical Advisory Committee on the Food Contamination Programme	Rome, 28 November - 2 December	UNEP/FAO	UNEP/FAO	20
WMO expert meeting on climate system monitoring	Geneva, 5-9 December	UNEP/WMO	UNEP/WMO	15

Title	Venue and dates	Financed by	Organizer	Number of participants
		INFOTERRA (Budget subline 1302)		
INFOTERRA National Seminar for Malaysia	Kuala Lumpur, 16 and 17 February	Government of Malaysia	Government of Malaysia/ UNEP	100
INFOTERRA National Seminar for Indonesia	Jakarta, 18 and 19 February	Government of Indonesia	Government of Indonesia/ UNEP	30
INFOTERRA National Seminar for Poland	Krakow, Poland, 21 and 22 April	Government of Poland	Government of Poland/ UNEP	50
INFOTERRA National Seminar for the German Democratic Republic	Dresden, German Democratic Republic, 10 January	Government of the German Democratic Republic	Government of the German Democratic Republic/UNEP	15
INFOTERRA National Seminar for Mongolia	Ulan Bator, 14 and 15 July	Government of Mongolia	Government of Mongolia/ UNEP	50
INFOTERRA National Seminar for Czechoslovakia	Bratislava, Czechoslovakia, 18 and 19 July	Government of Czechoslovakia	Government of Czechoslovakia/ UNEP	30
INFOTERRA National Seminar for Thailand	Bangkok, 8 November	Government of Thailand	Government of Thailand/ UNEP	52
INFOTERRA National Seminar for Nepal	Kathmandu, 10 and 11 November	Government of Nepal	Government of Nepal	32

International Register of Potentially Toxic Chemicals (IRPTC)
(Budget subline 1304)

Evaluation meeting on the training course in preventive toxicology	Moscow, 9 and 10 June	UNEP	UNEP/ UNEPCOM	22
Second expert meeting on basic principles of definition of toxicological and safety data for chemical substances in international trade	Moscow, 5-9 December	UNEP	UNEP/ UNEPCOM	20

Outer limits
(Budget subline 1303)

Second meeting of the Scientific Advisory Committee of the World Climate Impact Studies Programme	Dublin, 5-8 January	UNEP	UNEP	12
Study Conference on the Sensitivity of Ecosystems to Climate Change: Possible Impacts of CO_2 in the Atmosphere	Villach, Austria, 19-23 September	UNEP	UNEP	43
Workshops to develop the implementation plan for the International Satellite Land Surface Climatology Project	Boulder, United States, 27 June - 1 July Innsbruck, Austria, 21-26 July	UNEP	International Association of Meteorology and Atmospheric Physics/ICSU Committee on Space Research	100
Sixth session of the Co-ordinating Committee on the Ozone Layer	Geneva, 5-8 April	UNEP	UNEP	39

Title	Venue and dates	Financed by	Organizer	Number of participants
Regional Technical Conference on Climate for Latin America and the Caribbean	Paipa, Colombia, 28 November - 3 December	WMO/UNEP	UNEP	132
		Research and assessment (Budget subline 1305)		
Meeting of the panel of advisers to the International Photosynthesis Study Group	Brussels, 6 August	UNEP	King's College, University of London	10
		Environmental aspects of human settlements planning (Budget subline 0104)		
Training workshop and study tour on human settlements planning to improve environmental conditions	Moscow and Tashkent, USSR, 1-21 August	UNEP	UNEP/ UNEPCOM/ UNCHS	23
International Symposium on Solid Waste Management for Developing Countries	Karlsruhe, Federal Republic of Germany, 23 September - 7 October	Federal Ministry of Research and Technology, Federal Republic of Germany	UNEP/Federal Ministry of Research and Technology	58
		Human and environmental health (Budget subline 0107)		
Workshop on Mutagenicity and Carcinogenicity Testing	Nairobi, 24 January - 4 February	UNEP/IARC/ International Association of Environmental Mutagen Societies	IARC/ University of Nairobi/ UNEP	20

Meeting on Lay Reporting of Environmental Health Information	Addis Ababa, 7-11 March	UNEP	UNEP/WHO	
Second Inter-agency Consultation on Post-harvest Food Loss Prevention	Rome, 6 and 7 September	FAO/ECA UNEP	FAO	9
Meeting of a steering committee for the Latin American Intercountry Programme for the Development and Application of Integrated Pest Control in Cotton Growing	Colombia, 29 and 30 September	FAO/UNEP/ Government of Colombia	FAO	Representatives from 7 Latin American countries
Meeting of a steering committee for the North-east African Intercountry Programme for the Development and Application of Integrated Pest Control in Cotton Growing	Khartoum, 8 and 9 October	FAO/UNEP	FAO	Representatives from 5 African countries
Workshop on Planning and Management of National Programmes for the Control and Elimination of Echinococcosis/Hydatidosis	Athens, 5-9 December	Mediterranean Zoonoses Control Centre	UNEP/WHO	10

Arid and semi-arid lands ecosystems including desertification
(Budget line 1700)

Meeting on erosion control and water policy	Tripoli, 16-22 May	UNEP/ALECSO	ALECSO	30
Fourth session of the Consultative Group for Desertification Control	Nairobi, 15-17 February	UNEP	UNEP	35

Title	Venue and dates	Financed by	Organizer	Number of participants
		Tropical forests and woodlands (Budget subline 1102)		
Meeting on tropical forest development	Rome, 18-24 October	FAO/UNEP	FAO	30
UNCTAD meeting on tropical timber	Geneva, 7-11 March	UNEP/UNCTAD	UNCTAD	20
CIDIE meeting on deforestation	New York, 20-24 June	UNEP	CIDIE	10
International symposium on strategies and designs for afforestation, reforestation and tree planting	Wageningen, Netherlands, 19-23 September	UNEP/FAO/ Netherlands Government	FAO	30
Consultative meeting on Asia and Pacific regional activities on tropical forests:				
First part	Kuala Lumpur, 1-6 September	UNEP	UNEP	Representatives from 6 Governments and 3 UN bodies
Second part	Bangkok, 19-21 December	UNEP	UNEP	
		Soils *(Budget subline 1106)*		
Meeting on an international reference base for soil classification	Sofia, 12-16 October	UNEP/ FAO/ International Society of Soil Science	Institute for Soil Science, Sofia	20

		Water (Budget subline 1107)		
Training seminar on identification, implementation and financing of drinking water supply and sanitation projects	Ouagadougou, 18-29 July	UNEP/ CEFIGRE	CEFIGRE	33
Seventh session of the International Scientific Council of CEFIGRE	Sophia Antipolis, France, 1-3 June	UNEP/ CEFIGRE	CEFIGRE	44
First meeting of the working group on large-scale water projects	Hamburg, Federal Republic of Germany, 21-27 August	UNEP	UNEP	10
Third meeting of the International Scientific Council on Protection of the Lithosphere	Moscow, 5-7 December	UNEP/ UNESCO	UNEPCOM	
Symposium on the Hydrology of Humid Tropical Regions	Hamburg, Federal Republic of Germany 16-19 August	UNEP/ International Association of Hydrological Sciences (IAHS)	IAHS	70
Symposium on Dissolved Loads of Rivers and Surface Water Quantity/ Quality Relationships	Hamburg, Federal Republic of Germany, 16-18 August	UNEP/ IAHS	IAHS	100
		Genetic resources (Budget subline 1108)		
International Workshop on Uses of Microbiological Processes in Arid Lands for Desertification Control and Increased Productivity	Albuquerque, United States, 6-9 October; Santa Fe, United States, 10-12 October	UNEP	UNEP/Fourth International Symposium on Environmental Biogeochemistry	200

Title	Venue and dates	Financed by	Organizer	Number of participants
Fourth meeting of the Conference of the Parties to CITES	Gaborone, 19-30 April	UNEP/CITES/ Botswana Government	CITES/UNEP/ Botswana Government	300
Extraordinary meeting of the Parties to CITES	Gaborone, 30 April	UNEP/CITES/ Botswana Government	CITES/UNEP/ Botswana Government	300
5[illegible]th meeting of the IUCN Species Survival Commission	Harare, 14-16 April	UNEP/WWF	IUCN	59
22nd session of the IUCN Commission on National Parks and Protected Areas	Harare, 23-27 May	UNEP/IUCN/WWF/ Zimbabwe Government	IUCN	30
IUCN Commission on Ecology/ International Planned Parenthood Federation (IPPF) Workshop on Population and Natural Resources	Oxford, United Kingdom, 4-6 July	UNEP/IUCN IPPF	IUCN/	15
Species Survival Commission Steering Committee meeting	Gainesville, United States 16-18 June	UNEP/IUCN/WWF	IUCN	17
Meeting of the Steering Committee of the IUCN Commission on Environmental Planning	Coppet, Switzerland, 6-8 July	UNEP/IUCN	IUCN	9
First meeting of the Steering Committee for the Conference on the Implementation of the World Conservation Strategy	Gland, Switzerland, 9 July	Costs borne by participants	IUCN	5

Workshop on the Establishment of an International Microbial Strain Data Network	Brussels, 15-17 November	UNEP/National Foundation of Scientific Research of Belgium/Commission of the European Communities	UNEP	40
		Wildlife and protected areas (Budget sublines 1110)		
Ad hoc Commission on Ecology meeting on the World Conservation Strategy Source-book *Coastal Ecology*	Oxford, United Kingdom, 12-14 January	UNEP/IUCN	IUCN	4
Preliminary planning meeting to develop proposals for an international workshop - conference on implementation of the World Conservation Strategy	Ottawa, 2 March	Costs borne by participants	Canadian Wildlife Federation	8
Ad hoc meeting on the further implementation of the World Conservation Strategy	Rome, 2 and 3 March	Costs borne by participants	UNEP	11
Sixth meeting of the ASEAN Experts Group on the Environment	Indonesia, 22-24 March	ASEAN/IUCN/ UNEP/Government of Sweden	ASEAN	–
Meeting of the IUCN Commission on Ecology and Symposium on Arid Lands in the Americas	Lima, 5-10 April	UNEP/IUCN/WWF	IUCN/ Universidad Nacional Agraria, Lima	20 and 150
Meeting of the IUCN Commission on Environmental Planning	New Delhi, 25-29 August	UNEP/IUCN/ Government of India/WWF	IUCN/Government of India	35

Title	Venue and dates	Financed by	Organizer	Number of participants
Meeting on the African Convention on the Conservation of Nature and Natural Resources	Bonn, Federal Republic of Germany, August 1983	IUCN/UNEP/Government of the Federal Republic of Germany	IUCN	45
Ad hoc Commission on Ecology meeting on conservation of ecological processes	Philadelphia, United States, 9-12 August	UNEP/IUCN	IUCN	10
Joint meeting of the IUCN Commission on Ecology and SCOPE on tropical rain forests in south-east Asia	Gland, Switzerland, 22-26 August	UNEP/IUCN	IUCN/SCOPE	10
Meeting of the IUCN Commission on Environmental Planning	Stockholm, 1-3 September	UNEP/IUCN	IUCN	15
Commission on Ecology workshop and International Symposium on the Future	Kuala Lumpur, 20-23 September	UNEP/IUCN	IUCN	20
Seminar/workshop on conservation strategies and their development	Geneva, 2-4 November	USAID/IUCN/ UNEP	USAID/IUCN	20
Species Survival Commission Steering Committee meeting	Kew, United Kingdom, 19 and 20 November	UNEP/IUCN/WWF	IUCN	15
Tenth meeting of the Standing Committee of the CITES Convention	Gland, Switzerland, 3-5 November	CITES parties	CITES/UNEP	10
Second meeting of the Steering Committee for the Conference on the Implementation of the World Conservation Strategy	Gland, Switzerland, 20 November	Costs borne by participants	IUCN	5

Workshop on conservation and development of the Dhofar region	Salalah and Muscat, Oman, 19 September - 1 October	Government of Oman/UNEP	IUCN/Government of Oman	30
International Congress on Biosphere Reserves	Minsk, USSR, 26 September - 2 October	UNEP/UNESCO/ Governments of the Byelorussian SSR and the USSR	UNESCO/Governments of the USSR and the Byelorussian SSR	300
		Industry and environment (Budget subline 0408)		
Fourth meeting of the UNEP Environmental Consultative Committee on the Pulp and Paper Industry	Pointe-Claire, Canada, 20-22 June	UNEP/Government of Canada	UNEP/Government of Canada	25
WTO/UNEP Workshop on Environmental Aspects of Tourism	Madrid, 5-8 July	UNEP/WTO	UNEP/WTO	30
Regional Workshop on Industrial Environmental Impact Assessment and Environmental Criteria for the Siting of Industry	Addis Ababa, 27-30 June	UNEP/ECA	UNEP/ECA	30
		Marine pollution (Budget subline 0501)		
International Symposium on Integrated Global Ocean Monitoring	Tallinn, USSR, 2-10 October	UNEP	Government of the USSR/UNEP/ UNESCO/IOC/WMO	150

Title	Venue and dates	Financed by	Organizer	Number of participants
		Living marine resources (Budget subline 0502)		
Ad hoc planning and co-ordinating consultation on the UNEP/FAO Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals	Nairobi, 11-14 January	UNEP	UNEP	12
Meeting on development of techniques to be used where cetaceans have come ashore alive	Horsham, United Kingdom, 17-19 October	Royal Society for the Prevention of Cruelty to Animals (RSPCA)/UNEP	RSPCA	10
		Regional Seas Programme (Budget subline 0503)		
Meeting of the Joint Co-ordinating Group for the South Pacific Regional Environment Programme	Nouméa, New Caledonia, 23 January and 31 January - 1 February	UNEP	SPC/UNEP/ ESCAP/SPEC	8
Blue Plan focal points	France, 31 January - 2 February	Mediterranean Trust Fund	UNEP	30
Fifteenth Pacific Science Congress	Dunedin, New Zealand, 1-11 February	UNEP	Pacific Science Association/ UNEP	20
Meeting of the Bureau of the Contracting Parties to the Barcelona Convention	Dubrovnik, Yugoslavia, 27 February	UNEP/ Mediterranean Trust Fund	UNEP	15

Third Meeting of Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and related protocols	Dubrovnik, Yugoslavia, 28 February - 4 March	UNEP/ Mediterranean Trust Fund/ Participants	UNEP	77
Second meeting of the Monitoring Committee for the Caribbean Action Plan	Cartagena, Colombia, 17-19 March	UNEP	UNEP	20
Conference of Plenipotentiaries on the Protection and Development of the Marine and Coastal Environment of the Wider Caribbean Region	Cartagena, Colombia, 21-24 March	UNEP	UNEP	50
Intergovernmental meeting on the Caribbean Action Plan	Cartagena, Colombia, 24-26 March	UNEP	UNEP	50
Second meeting of the Co-ordinating Body on the Seas of East Asia	Yogyakarta, Indonesia, 25 and 26 March	UNEP/East Asian Seas Trust Fund	UNEP	20
Meeting of the Bureau of the Contracting Parties to the Barcelona Convention	Athens, 7 and 8 April	UNEP/ Mediterranean Trust Fund	UNEP	15
Consultative meeting of research and training institutions in the South Pacific region	Fiji, 18-20 April	UNEP	SPC/UNEP	14
Meeting of the Joint Co-ordinating Group for the South Pacific Regional Environment Programme	Fiji, 18-21 April	UNEP	SPC/UNEP/ ESCAP/SPEC	8
Inter-agency meeting on the Kuwait Action Plan programme	Kuwait, 7 and 8 June	Kuwait Trust Fund	UNEP/ Regional Organization for the Protection of the Marine Environment	12

Title	Venue and dates	Financed by	Organizer	Number of participants
Workshop on standardization of methods for pollution monitoring in the south-east Pacific: Petroleum and pesticides	Callao, Peru, 4-15 July	Permanent Commission for the South Pacific (CPPS)/UNEP	CPPS/UNEP	20
Intergovernmental meeting on the south-east Pacific action plan	Quito, 20-22 July	CPPS/UNEP	CPPS/UNEP	30
Workshop on standardization of oceanography methods and data in the East Asian Seas	Phuket, Thailand, 25-29 July	UNEP/East Asian Seas Trust Fund	Government of Thailand/ UNEP	20
Regional technical meeting on the survey of sources and monitoring of oil pollution	Jakarta, 9 and 10 August	UNEP/East Asian Seas Trust Fund	Government of Indonesia/ UNEP	20
Workshop on environmental management of bay ecosystems in the Caribbean	Havana, 19-25 September	UNEP/UNESCO/ UNDP	UNESCO/ Government of Cuba/ UNEP/UNDP	50
Regional workshop on coastal and marine conservation in the East African Region	Mauritius, 3-9 October	UNEP/South Carolina Sea Grant Consortium	IUCN/Government of Mauritius/ South Carolina Sea Grant Consortium/UNEP	25
Symposium on hydrodynamic modelling of the Kuwait Action Plan	Dhahran, Saudi Arabia, 15-19 October	Kuwait Trust Fund	UNESCO/UNEP/ Regional Organization for the Protection of the Marine Environment	30
Workshop on jellyfish blooms in the Mediterranean	Athens, 31 October - 4 November	UNEP/ Mediterranean Trust Fund	UNEP	25

Meeting of the Bureau of the Contracting Parties to the Barcelona Convention	**Athens, 3 and 4 November**	**UNEP/ Mediterranean Trust Fund**	**UNEP**	**10**
Third meeting of the Monitoring Committee of the Caribbean Action Plan	**Havana, 8-10 November**	**UNEP**	**UNEP**	**20**
Third meeting of the Joint Co-ordinating Group for the South Pacific Regional Environment Programme	**Nouméa, New Caledonia, 17 and 18 November**	**UNEP**	**SPC/UNEP/ ESCAP/SPEC**	**8**
Sixteenth meeting of the Inter-agency Advisory Committee for MED POL	Athens, 21-25 November	UNEP/ Mediterranean Trust Fund	UNEP	20
		Energy (Budget line 0700)		
International workshop on energy conservation in developing countries	Geneva, 21-25 November	UNEP	UNEP	21
Meeting on comparative assessment of risk from energy production and use	New York, 5-9 December	UNEP/IAEA/ WHO	UNEP	13
		Environmental law (Budget subline 1002)		
Inter-agency consultation on wastes and potentially harmful chemicals, coastal zone management, soil conservation and environmental emergencies	Geneva, 16-18 February	UNEP	UNEP	10

Title	Venue and dates	Financed by	Organizer	Number of participants
Inter-agency consultation on transboundary air pollution, legal and administrative mechanisms for the prevention and redress of pollution damage and protection of rivers and other inland waters against pollution	Geneva, 6-10 June	UNEP	UNEP	11
Meeting of experts on protection of the marine environment against pollution from land-based sources	Geneva, 3 and 4 October	UNEP	UNEP	7
Meeting of experts on toxic wastes and potentially harmful chemicals	Geneva, 24 and 25 October	UNEP	UNEP	7
	Environmental education and training (Budget sublines 0305 and 0306)			
European seminar on the role of the university in environmental education	Budapest, 17-21 October	UNESCO/ UNEP	UNESCO	40
	Information (Budget subline 0303)			
Media seminar on the environment	Manila, 12-18 December	UNEP/Press Foundation of Asia	Press Foundation of Asia	14

C. TRAINING COURSES

Title	Venue and dates	Financed by	Organizer	Number of participants
		INFOTERRA (Budget subline 1302)		
Training course on basic INFOTERRA operations for English-speaking national focal points	Nairobi, 22-25 August	UNEP	UNEP	11
Training course on general information work for French-speaking national focal points	Moscow and Leningrad, 17 October - 1 November	UNEP	UNEP/ UNEPCOM/ INFOTERRA national focal point in the USSR	12
Training course on general information work for Spanish-speaking national focal points	Brasilia, 23 November - 2 December	UNEP	UNEP/ECLA/ INFOTERRA national focal point in Brazil	17
		International Register of Potentially Toxic Chemicals (IRPTC) (Budget subline 1304)		
International Training Course in Preventive Toxicology	Moscow, Kiev and Tashkent, 11 April - 9 June	UNEP	UNEP/UNEPCOM	20
		Environmental aspects of human settlements planning (Budget subline 0104)		
Training course on water leakage detection and prevention	Tokyo, 30 November - 9 December	UNEP	UNEP/National Water Leak Survey Engineering Association	12

Title	Venue and dates	Financed by	Organizer	Number of participants
		Human and environmental health (Budget sublines 0107)		
Training course on integrated cotton pest management	Adana, Turkey, 5-8 September	FAO/UNEP/ Government of Turkey	FAO	12
		Arid and semi-arid lands ecosystems including desertification (Budget line 1700)		
Training course on ecological studies	Kairouan, Tunisia, 1-15 May	UNEP/ALECSO	ALECSO	20
Course on soil erosion and water conservation	Tripoli, 21 May - 4 June	UNEP/ALECSO	ALECSO	32
		Environmental education and training (Budget sublines 0305 and 0306)		
International post-graduate course on ecosystem management	Technical University of Dresden, German Democratic Republic, October-July	UNEP/UNESCO/ Government of the German Democratic Republic	Government of the German Democratic Republic,	15
Training course on sand dune fixation	Ashkhabad, USSR, 24 September - 14 October	UNEP	UNEPCOM	23

Water
(Budget subline 1107)

Course on management of large irrigated schemes	Sophia Antipolis, France, and Tunisia, 20 June - 23 July	UNEP/ CEFIGRE	CEFIGRE	25, all from developing countries

Genetic resources
(Budget subline 1108)

Course on conservation and utilization of plant genetic resources	Birmingham, United Kingdom, 10-17 January	IBPGR/UNEP	University of of Birmingham	9 from developing countries
Course on plant genetic resources evaluation, utilization and management	Birmingham, United Kingdom, 18-21 January	IBPGR/UNEP/ Government of India	University of Birmingham	2 from India
Course on rhizobium-legume technology	San José, Costa Rica, 2-27 May	UNEP/UNESCO/ICRO/ International Institute of Tropical Agriculture/ Porto Alegre and NifTAL MIRCENs/Consejo Nacional de Investigaciones Cientificas y Tecnológicas (Costa Rica)	Porto Alegre and NifTAL MIRCENs	17 from Latin America

Title	Venue and dates	Financed by	Organizer	Number of participants
Course on soil microbiology	Rabat, 17-28 June	UNEP/UNESCO/ Office de la Recherche Scientifique et Technique Outre-mer (Paris)	Institut Agronomique et Vétérinaire Hassan II	12 from Africa
Course on conservation and management of animal genetic resources	Budapest, 5-16 September	FAO/UNEP	Hungarian University of of Veterinary Sciences	18 from developing countries
Course on legume inoculants for biological nitrogen fixation technicians	Hyderabad, India, 4 September - 14 October	FAO/UNEP/ International Crops Research Institute for the Semi-arid Tropics (ICRISAT)	ICRISAT	8 from Asian countries
		Wildlife and protected areas (budget subline 1110)		
Training seminar for officers from CITES Parties in the central and south America and the Caribbean region	Washington, 1-12 August	UNEP/CITES/ United States State Department/Canadian Wildlife Service/WWF (United States)	CITES/UNEP/ Governments of the United States and Canada/WWF (United States)	26
		Industry and environment (Budget subline 0408)		
Seventh regional training workshop on environmental management in the pulp and paper industry	Rome, 21-25 March	Swedish International Development Authority	UNEP	15 from developing countries

Title	Venue and dates	Financed by	Organizer	Number of participants
		Energy (Budget line 0700)		
International course on rural energy planning	Enschede, Netherlands, 1 May-30 June	UNEP/ Commission of the European Communities/UNESCO	Twente University of Technology	26
		Regional seas programme (Budget subline 0503)		
Workshop on beach cleaning methodologies in the Caribbean islands	Barbados, 31 January - 4 February	UNEP/OAS/IMO	IMO/UNEP	15
Training course on controlling and combating oil pollution in the Mediterranean	Urbino, Italy, 26 September - 8 October	UNEP/Mediterranean Trust Fund/SOGESTA	SOGESTA/ UNEP	30
Intercalibration exercise and consultation meeting on microbiological methods for coastal water quality monitoring	Barcelona, Spain, 7-11 November	UNEP/WHO	UNEP/WHO	25
Workshop on pollution control and contingency planning in the East African region	Mombasa, Kenya, 24 November 2 December	UNEP	IMO/UNEP	20
Training workshop on oceanographic sampling, analysis, data handling and care of equipment	Doha, 3-17 December	Kuwait Trust Fund	IOC/UNEP/ Regional Organization for the Protection of Marine Environment	25

Annex V

THE ENVIRONMENT FUND: TABLES

Table 1: Outstanding contributions for 1978-1983 as at 31 December 1983

Table 2: Appropriation for Fund programme activities, its apportionment by budget lines and the allocations made to budget lines by the Executive Director (biennium 1982-1983)

Table 3: 1982 and 1983 commitments for Fund programme activities and Fund programme reserve activities as at 31 December 1983

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Table 10: Counterpart contributions secured 1983

TABLES

Table I

OUTSTANDING CONTRIBUTIONS FOR 1978-1983
AS AT 31 DECEMBER 1983

(Dollars)

Country	1978-1981	1982	1983	Total
Algeria	–	550	–	550
Belgium	–	–	193 636 *	193 636
Benin	–	2 000	2 000	4 000
Brazil	–	20 000	20 000	40 000
Cameroon, United Rep. of	–	5 448	7 264	12 712
Canada	–	–	865 000	865 000
Egypt	–	–	24 340	24 340
Gabon	–	–	8 775 *	8 775
India	–	–	48 794	48 794
Iran	55 646	–	–	55 646
Italy	27 359	–	–	27 359
Kenya	–	11 283	–	11 283
Korea	–	–	10 000	10 000
Malawi	–	–	1 770 *	1 770
Nigeria	–	8 388	– *	8 388
Pakistan	–	–	5 000	5 000
Peru	–	15 000	20 000	35 000
Philippines	–	–	7 186	7 186
Portugal	–	–	3 000 *	3 000
Somalia	–	–	575	575
Sudan	–	1 500	1 500	3 000
Syria	–	–	1 000	1 000
Togo	–	484	484 *	968
Tunisia	–	–	5 400	5 400
Turkey	–	–	5 671	5 671
Uganda	–	557	2 000	2 557
Tanzania, United Rep. of	–	3 287	3 287	6 574
Venezuela	–	–	100 000	100 000
Yemen, Democratic	–	–	1 602	1 602
Zaire	–	–	25 000	25 000
Zambia	–	–	7 463	7 463
Total	83 005	68 497	1 665 226	1 816 728
Summary				
Total contributions	124 038 859	29 685 630	29 015 480	182 739 969
Total paid	123 955 854	29 617 133	27 350 254	180 923 241
Amount unpaid	83 005	68 497	1 665 226	1 816 728

* Estimated pledges based on 1982 confirmed pledges.

Table 2

APPROPRIATION FOR FUND PROGRAMME ACTIVITIES' ITS APPORTIONMENT BY BUDGET LINES AND THE ALLOCATIONS MADE TO BUDGET LINES BY THE EXECUTIVE DIRECTOR BIENNIUM 1982-1983

	Budget lines	Appropriation/[a] Apportionment	Allocation	Apportionment	Allocation
		(Thousands of dollars)		(percentages)	
01	Human settlement and human health	10 000	6 900	11	10.8
03	Support	17 100	12 500	18	19.5
04	Environment and development	6 000	4 600	6	7.2
05	Oceans	10 500	6 900	11	10.8
07	Energy	2 100	1 400	2	2.2
10	Environment management (including environmental law)	2 500	1 700	3	2.6
11	Terrestrial ecosystems	16 800	9 750	18	15.2
12	Natural disasters	600	400	1	0.6
13	Earthwatch	16 900	12 900	18	20.2
16	Environmental data	1 500	850	2	1.3
17	Arid and semi-arid lands (including desertification)	9 000	6 100	10	9.5
	Total Fund programme activities	93 000	64 000	100	100.0

[a] Decision 9/23, para. 14.

Table 3

1982 AND 1983 COMMITMENTS FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES AS AT 31 DECEMBER 1983
(Thousands of dollars)

	Budget lines	Apportionment	1982 Allocation used	Commitment	Apportionment	1983 Allocation available	Commitment
01	Human settlements and human health	4 500	2 744	2 744	5 500	3 556	2 781
03	Support	7 900	5 147	5 147	9 200	7 453	6 026
04	Environment and development	2 700	1 935	1 935	3 300	2 315	2 274
05	Oceans	4 700	1 737	1 737	5 800	5 163	4 516
07	Energy	1 000	449	449	1 100	951	802
10	Environmental management (including environmental law)	1 100	435	435	1 400	1 265	924
11	Terrestrial ecosystems	7 500	3 191	3 191	9 300	7 459	4 465
12	Natural disaster	300	44	44	300	356	123
13	Earthwatch	7 500	4 136	4 136	9 400	8 614	6 861
16	Environmental data	800	256	256	700	544	208
17	Arid and semi-arid lands (including desertification)	4 000	1 801	1 801	5 000	4 449	3 019
	Total Fund programme activities	42 000	21 875	21 875	51 000	42 125	31 999
	Total Fund programme reserve	1 000	271	271	1 000	729	564
	Grand Total	43 000	22 146	22 146	52 000	42 854	32 563

Table 4

1983 COMMITMENTS FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES AS AT 31 DECEMBER 1983

(Dollars)

	Budget lines	Allocation available 1983	Total commitments 1983	1983 commitments incurred before 1983	1983 commitments incurred during 1983
01	Human settlements and human health	3 555 949	2 780 722	1 831 480	949 242
03	Support	7 453 093	6 026 369	5 186 328	840 041
04	Environment and development	2 315 287	2 273 976	1 812 734	461 242
05	Oceans	5 162 880	4 516 056	2 204 005	2 312 051
07	Energy	950 776	802 188	475 728	326 460
10	Environmental management (including environmental law)	1 265 047	924 347	625 325	299 022
11	Terrestrial ecosystems	7 458 938	4 465 035	2 761 036	1 703 999
12	Natural disaster	355 733	123 038	35 500	87 538
13	Earthwatch	8 613 792	6 860 591	4 819 438	2 041 153
16	Environmental data	544 607	208 050	80 500	127 550
17	Arid and semi-arid lands (including desertification)	4 448 903	3 019 055	1 737 890	1 281 165
	Total Fund programme activities	42 125 005	31 999 427	21 569 964	10 429 463
	Total Fund programme reserve	729 199	564 465	257 360	307 105
	Grand Total	42 854 204	32 563 892	21 827 324	10 736 568

Table 5

**NEW COMMITMENTS APPROVED DURING THE YEAR 1983
FOR FUND PROGRAMME ACTIVITIES AND FUND PROGRAMME RESERVE ACTIVITIES
AS AT 31 DECEMBER 1983
(Dollars)**

	Budget lines	Total commitment approved for 1983	Commitments approved for 1983	Commitments approved for 1984	Commitments approved for 1985	Commitments approved for 1986
01	Human settlements and human health	1 912 155	949 242	555 730	407 183	–
03	Support	4 098 822	840 041	2 394 931	794 150	69 700
04	Environment and development	455 262	461 242	(4 980)	–	–
05	Oceans	2 784 593	2 312 051	410 122	62 420	–
07	Energy	377 460	326 460	51 000	–	–
10	Environmental management (including environmental law)	326 522	299 022	27 500	–	–
11	Terrestrial ecosystems	2 993 907	1 703 999	970 057	319 851	–
12	Natural disasters	87 538	87 538	–	–	–
13	Earthwatch	3 767 542	2 041 153	997 301	634 088	95 000
16	Environmental data	127 550	127 550	–	–	–
17	Arid and semi-arid lands (including desertification)	2 236 063	1 281 165	779 898	115 000	60 000
	Total Fund programme activities	19 167 414	10 429 463	6 181 559	2 332 692	224 700
	Total Fund programme reserve	563 053	307 105	144 598*	111 350*	–
	Grand Total	19 730 467	10 736 568	6 326 157	2 444 042	224 700

*A commitment of $111,350 for 1984-1985 against the reserve line is being charged to the new budget line of Arms Race and the Environment.

Table 6

ALLOCATIONS AND COMMITMENTS 1982 AND 1983
BY CONVERTIBLE AND NON CONVERTIBLE CURRENCIES
AS AT DECEMBER 1983

(Millions of Dollars)

Budget line	Convertible currency				Non-convertible currency			
	1982		1983		1982		1983	
	Allocations used	Expenditure	Allocations available	Commitments	Allocations used	Expenditure	Allocations available	Commitments
01 Human settlements and human health	1.43	1.43	2.57	2.08	1.31	1.31	1.57	0.70
03 Support	4.88	4.88	6.22	5.27	0.26	0.26	1.18	0.76
04 Environment and development	1.28	1.28	2.11	1.84	0.66	0.66	0.57	0.43
05 Oceans	1.71	1.71	4.97	4.33	0.03	0.03	0.25	0.19
07 Energy	0.42	0.42	0.96	0.80	0.04	0.04	—	—
10 Environmental management (including environmental law)	0.35	0.35	1.03	0.75	0.08	0.08	0.24	0.17
11 Terrestrial ecosystems	2.49	2.49	3.67	2.99	0.70	0.70	2.81	1.48
12 Natural disasters	0.04	0.04	0.31	0.12	—	—	0.05	—
13 Earthwatch	3.51	3.51	6.88	5.72	0.63	0.63	1.86	1.14
16 Environmental Data	0.25	0.25	0.40	0.21	—	—	0.19	—
17 Arid and semi-arid lands (including desertification)	0.79	1.79	3.00	2.16	1.01	1.01	1.28	0.86
Fund reserve	0.27	0.27	0.73	0.56	—	—	—	—
Total	17.42	17.42	32.85	26.83	4.72	4.72	10.00	5.73

Table 7

DISTRIBUTION OF COMMITMENTS BY INSTITUTION IMPLEMENTING FUND PROJECTS 1982 AND 1983
(Dollars)

	Expenditures 1982	No. of projects	Commitments 1983	No. of projects
Co-operating agencies				
DTCD	34 264	3	28 200	1
ECA	160 256	2	175 431	2
ECE	350 966	5	322 948	3
ECLA	348 597	3	328 624	3
ECWA	41 044	1	155 990	1
ESCAP	252 480	3	168 780	2
FAO	876 906	24	2 788 261	24
IAEA	943	2	31 000	1
IARC	112 196	2	205 855	3
ILO	111 907	3	168 244	3
IMO	105 050	3	206 114	3
IOC/UNESCO	27 000	4	65 000	1
UNCHS	345 134	3	532 516	4
UNCRD	–	–	21 000	1
UNCTAD	11 000	1	36 000	1
UNCTC	–	–	12 000	1
UNDIESA	1 149	1	135 000	2
UNDRO	16 255	1	65 538	2
UNESCO	1 821 414	20	2 667 160	20
UNICEF	105 053	1	1 207	1
UNIDO	17 661	1	118 700	1
UNIS	31 915	1	16 772	1
UNRISD	89 330	2	129 944	2
UNSO	370 383	2	559 750	6
WHO	1 283 074	15	1 733 252	15
WMO	413 853	12	699 561	11
Total co-operating agencies	6 873 729	115	11 372 847	115

Table 7 (continued)

	Expenditures 1982	No. of projects	Commitments 1983	No. of projects
Supporting organizations				
(a) *Governments*				
Bulgaria	8 171	1	4 902	1
China	–	–	163 339	2
Czechoslovakia	260	1	–	–
Hungary	(5 380)	1	–	–
Indonesia	–	–	22 350	1
Kenya	4 040	1	(13 300)	1
Malaysia	–	–	17 750	1
Mongolia	278 715	1	115 068	1
Niger	2 754	1	6 878	1
Philippines	29 269	1	53 500	2
Poland	–	–	1 000	1
Somalia	15 038	1	8 564	1
Spain	135 887	1	50 000	1
Sri Lanka	4 082	1	70 000	2
Thailand	–	–	24 900	1
Tunisia	–	–	60 512	1
USSR	3 552 257	12	3 042 483	13
Venezuela	7 933	1	109 067	1
Democratic Yemen	–	–	265 600	1
Total Governments as supporting organizations	4 033 026	23	4 002 612	32

Table 7 (continued)

	Expenditures 1982	No. of projects	Commitments 1983	No. of projects
Supporting organizations				
(b) *Others*				
AFME	217 629	1	28 371	1
ALECSO	10 484	2	24 500	2
BBC	–	–	99 800	1
BEIJER	13 016	1	–	–
CARICOM	122 348	1	118 000	1
CCA	–	–	23 000	1
CEFIGRE	323 549	1	84 451	1
CHELSEA COLLEGE	299 186	1	311 506	1
CITES	34 416	2	122 048	1
COSPAR	–	–	40 000	1
CPPS	40 645	1	183 225	1
CSC	83 706	1	51 294	1
CTM	45 673	1	32 337	1
ELC	112 965	2	202 034	3
ESL/NRC	–	–	104 000	1
FEEMA	18 354	1	143 446	1
FSDC	34 638	1	65 362	1
HARWELL LAB	3 977	1	10 390	1
IAHS	–	–	20 000	1
IBPGR	146 600	1	237 407	2
ICE	15 773	1	33 227	1
ICIPE	99 516	1	58 302	1
IFIAS	24 285	1	20 000	1
IGPL	3 927	1	98 073	1
IIASA	–	–	34 420	1
IIED	80 600	3	105 663	2
INDERENA	77 672	1	42 168	1
IPS	–	–	30 000	1
IUCN	779 697	9	903 156	11
ISSS	18 880	1	–	–
JEA	21 873	1	–	–
KING'S COLLEGE	1 592	1	149 408	2
NRC-FRG	–	–	25 600	1
NWLSEA	–	–	45 000	1
OAS	116 695	1	73 505	1
ONERN	–	–	320 000	1
PAPRAC	2 000	1	6 000	1

Table 7 (continued)

	Expenditures 1982	No. of projects	Commitments 1983	No. of projects
PFA	–	–	30 000	1
RSC	75 800	1	30 800	1
SCOPE	161 045	7	539 102	6
SDA	12 339	1	55 000	1
SIL	3 954	1	11 397	1
SIPRI	–	–	92 300	1
SPC	–	–	389 720	1
TRCF	21 050	1	78 950	1
UOW	–	–	(6 084)	1
WWF	30 000	1	–	–
Total other supporting organizations	3 064 253	52	5 093 278	64
Programme activity centres	2 948 312	5	3 801 157	4
Internal projects	5 226 475	53	8 293 999	20
Grand Total	22 145 795	248	32 563 893	235

ABBREVIATIONS USED IN TABLE 7

AFME	Agence Francaise pour la maitrise de l'énergie
ALECSO	Arab League Educational, Cultural and Scientific Organization
ASRT	Academy for Scientific Research and Technology, Egypt.
BBC	British Broadcasting Corporation
BEIJER	Beijer Institute, Royal Swedish Academy of Sciences
CARICOM	Caribbean Community Secretariat
CCA	Caribbean Conservation Association, Bridgetown, Barbados
CEFIGRE	International Training Centre for Water Resources Management
CIRED	International Research Centre on Environment and Development
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COSPAR	Committee on Space Research, Paris
CPPS	Comisión Permanente del Pacífico Sur
CSC	Commonwealth Science Council
CTM	The Salto Grande Joint Technical Commission
DTCD	Department of Technical Co-operation for Development
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLA	Economic Commission for Latin America
ECWA	Economic Commission for West Asia
ELC	Environment Liaison Centre
ESCAP	Economic and Social Commission for Asia and the Pacific
ESL/NRC	Earth Sciences Laboratory, National Research Centre, Egypt
FAO	Food and Agriculture Organization of the United Nations
FEEMA	State Foundation for Environmental Engineering
FSDC	Farm Systems Development Corporation (Philippines)
HARWELL LAB	Harwell Laboratories
IAEA	International Atomic Energy Agency
IAHS	International Association of Hydrological Sciences
IARC	International Agency for Research on Cancer
IBPGR	International Board for Plant Genetic Resources
ICE	Indonesian Commission on the Environment
ICIPE	International Centre for Insect Physiology and Ecology
IDS	Institute of Development Studies
IFIAS	International Federation of Institutes for Advanced Study
IGPL	Institut für Geochemie, Petrologie und Lagerstattenkunde
IIASA	International Institute for Applied Systems Analysis
IIED	International Institute for Environment and Development
ILO	International Labour Organisation
IMO	International Maritime Organization
INDERENA	Instituto de desarollo de los recursos naturales renovables
IOC/UNESCO	Intergovernmental Oceanographic Commission, UNESCO
IPS	Inter-Press Service
ISSS	International Society of Soil Science
IUCN	International Union for the Conservation of Nature and Natural Resources
JEA	Japan Environment Association
KINGS COLLEGE	Kings College, London
NEPC	National Environment Protection Council, Philippines
NRC-FRG	Nuclear Research Centre, FRG
NRMC	Natural Resources Management Centre, Philippines
NWLSEA	National Water Leak Survey Engineering Association, Tokyo

OAS	Organization of American States
ONERN	Oficina National de Evalución de Recursos Naturales
PAP/RAC	PAP Regional Activity Centre—Yugoslavia
PFA	Press Foundation of Asia
RSC	Remote Sensing Centre
SC	Sierra Club
SCOPE	Scientific Committee on Problems of the Environment
SDA	Society for Development Alternatives, India
SIL	Societas Internationalis Limnologiae
SIPRI	Stockholm International Peace Research Institute
SPC	South Pacific Commission
TRCF	Technical Research Centre of Finland
UNA-USA	United Nations Association of the United States of America
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCRD	United Nations Centre for Regional Development
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations
UNDIESA	United Nations Department of International Economic and Social Affairs
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIS	United Nations International School
UNRISD	United Nations Research Institute for Social Development
UNSO	United Nations Sudano-Sahelian Office
UOW	University of Waterloo
VIS	Vision International
WHO	World Health Organization
WMO	World Meteorological Organization
WWF	World Wildlife Fund—US

Table 8

SUMMARY OF EXPENDITURES BY INSTITUTIONS IMPLEMENTING FUND PROJECTS
(percentages)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983[a]
Co-operating agencies	29.2	56.3	56.4	58.4	55.2	44.4	41.0	34.5	30.6	30.5	34.9
Supporting organizations	26.5	20.7	19.1	19.7	18.2	25.4	27.7	28.3	28.8	32.6	27.9
Internal projects	44.3	21.5	20.9	16.5	19.8	18.3	18.3	22.5	24.2	23.6	25.5
PACs	–	1.5	3.6	5.4	6.8	11.9	13.0	14.7	16.4	13.6	11.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Commitments.

Table 9

GEOGRAPHICAL DISTRIBUTION OF FUND COMMITMENTS 1981–1983
(Dollars)

	1978	1979	1980	1981	1982	1983
Africa	854 345	1 838 516	3 067 637	2 041 950	1 949 333	3 884 636
Asia	1 139 797	1 787 079	2 818 786	2 141 224	1 656 728	2 653 661
Latin America	759 045	1 418 502	1 217 405	1 378 736	1 878 378	2 581 692
North America	1 156 308	1 032 511	986 346	(233 216)	119 364	85 512
Europe	452 356	362 434	658 210	819 607	810 699	538 020
Total regional	4 361 852	6 439 042	8 748 384	6 148 301	6 414 502	9 743 521
Inter-regional	4 359 085	4 928 000	4 080 067	4 101 783	4 784 254	4 115 376
Global	13 745 511	15 660 158	14 031 071	12 956 877	10 947 040	18 704 995
Grand Total	22 466 448	27 027 200	26 859 522	23 206 961	22 145 795	32 563 892

Table 10

COUNTERPART CONTRIBUTIONS SECURED 1983

Governments	*Dollars*
Bulgaria	103 627
Germany, Federal Republic of	160 000
Netherlands	41 395
Sweden	1 000 000
Sweden	15 125
Total	1 320 147
Foundations	
Arab Gulf Programme for UN Development Organizations	1 560 000
	1 560 000
Grand Total	2 880 147